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ABSTRACT

The general goals of this study of Luo children in Kenya were (1) to provide a description of the acquisition of language in terms of categories acquired within the age range of 12-35 months; (2) to account for their linguistic competence in the generation of their language; and (3) to illustrate how social settings alter the linguistic performances of children. Conducting his research according to the designs and goals of Slobin's "A Field Manual for Cross-Cultural Studies" (1967), the author selected an initial sampling of 24 children (later increasing the sample to 38) and visited them periodically over a period of nine months. On the basis of data collected, the author has attempted to provide answers to the following questions: (1) At what age does babbling terminate? (2) At what age does the use of one-word utterances begin? (3) What are the characteristics of the one-word stage? (4) When does the two-word stage begin, and what are its characteristics? (5) What are the features of subsequent grammatical development? Information on the general nature of speech socialization and on the acquisition of rules governing the use of speech is also presented in this dissertation. [Not available in hard copy due to marginal legibility of original document.] (AMM)

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ACQUISITION OF LANGUAGE BY LUO CHILDREN

Benny Garell Blount

Dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Philosophy in Anthropology in the
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PREFACE

The motivation for the research on the acquisition of language by Luo children derived from the work of an interdisciplinary group of anthropologists and psychologists at the University of California, Berkeley. Their Field Manual (Slobin 1967) served as the basic theoretical reference for the research, and I am heavily indebted to the authors, Susan M. Ervin-Tripp, John J. Gumperz, Dan I. Slobin, Jan Brukman, Keith Kernan, Claudia Mitchell, and Brian Stross.

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The Institute for Development Studies, University College, Nairobi, provided me with a position as Visiting Research Associate during the research period,

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An expression of thanks is due the Luo people of Alego sub-location, Sakwa Location, Homa Bay District. They kindly allowed me to reside among them and welcomed me into their homes during the course of the research. A special note of thanks is due my interpreters and co-workers, Julius Okumu Obare and Peter Oyugi Olil. Without their patience and assistance, the research would have suffered immeasurably.

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CHAPTER 1:

INTRODUCTION

1.1 INTRODUCTION

Field research on the acquisition of communicative competence was conducted among the Luo of Kenya from April, 1967, until June, 1968.¹ The Luo, who number approximately 1,148,335, live in Siaya, Kisumu, and Homa Bay Districts, Nyanza Province, in southwestern Kenya (Kenya Census 1962).² The Luo are Nilotics, representing the southernmost group of that family. The original home of the Luo was the southern Sudan, and the Luo are related culturally and linguistically to Nilotes in the Sudan--the Dinka, Nuer, and Shilluk--and in Uganda--the Acholi, Alur, Langi, and Jopadhola. The Luo language, according to Tucker's classification, is a member of the Southern Lwo group of the Nilotic languages (Tucker and Bryan 1966).³

1.2 ETHNOGRAPHIC SKETCH OF THE LUO

Despite the fact that settlement by the Luo in the present Nyanza Province occurred over a period of a few hundred years (cf. Ogot 1967), the culture and especially the language of the Luo sub-tribes (or tribes) remained remarkably uniform. During the colonial and post-independence periods, changes were greatly accelerated, to the extent that considerable variation has come to prevail.

An account of the variation, however, the degree of social change, or even an adequate ethnographic description is beyond the scope of the present work. As a means of providing basic background information, however, a brief sketch of some of the major features of Luo society will be presented, since they are integral to later analyses (cf. DuPre' 1968 for ethnographic references).

1.2.1 Economy and Residence Patterns. Traditionally, the Luo had a mixed economy, with the major emphasis on pastoralism, primarily cattle herding. Some agriculture was practiced, the major crops being cereals--maize, millet and sorghum. Today, cattle herding is still an economic pursuit, but its importance has declined, and agriculture predominates in some areas. In addition to the traditional grain crops, a variety of crops are now grown, such as beans, groundnuts, sisal, sugar cane, cassava, and some coffee.

The homestead in the domestic economy was the most important unit, and the head of the homestead, the senior man, was in charge of the acquisition and distribution of wealth. The acquisition of wealth was tied closely to the land, which was ultimately under the control of the corporate lineage. Now, with land consolidation, units of land are owned privately, and each plot is controlled by a nuclear or an extended family. Although the shift in locus of control has had effects on social organization, the domestic economy per se has not been

altered greatly. Regardless of the ultimate controlling body, the use of the land was patterned so that the gardens and grazing areas of each homestead encircled the home. Each homestead was an "isolated" unit, encircled by a euphorbia hedge and separated from the other homesteads by gardens and grazing areas. Each homestead contained several huts, the number depending on the number of wives and married sons. Traditionally, a homestead would include members of three or perhaps four generations, traced patrilineally. At present, it is far more common for a homestead to contain only two generations, i.e. a nuclear family.

The essential features of the domestic economy, then, are that a mixed economy is practiced, agriculture is beginning to predominate in some areas, and the homestead is the prime unit in the domestic economy. Each homestead has its own gardens, and, nowadays, its own cattle grazing area, and each homestead is spatially isolated (this point will be discussed further in the following chapter; also cf. Whisson 1964).

1.2.2 Social Organization. Although the Luo are sometimes referred to as a tribe, there was not in traditional times any over-riding authority for the group as a whole, or any type of over-arching formal organization. Unification, to the extent that it existed, was on linguistic and cultural grounds. Formal types of organization existed at lower levels, based on a segmentary opposition type

of system. These levels consisted of sub-tribes, clans, and lineages.

Sub-tribes (ogendini) were the largest units within which all disputes were settled by mediation. Sub-tribes occupied a single piece of territory, and they were made up of a core lineage and a number of attached lineages (cf. Southall 1952; Whisson 1964). Within each sub-tribe, there was usually one dominant agnatic lineage and several clans or group of clans. The clans (Ḫoudi) were the major subdivisions of the core lineages of the sub-tribes, and the focus of unity was the eponymous ancestor. The generational depth of the clans varied, with a range of four or five generations to as many as twelve (cf. Evans-Pritchard 1949).

The clans were divided further into lineages, based on founding ancestors. The degree of segmentation within a clan varied, depending on the size of the clan and the territory it covered. There were also minimal and maximal agnatic lineages (cf. Southall 1952). Minimal lineages generally lived together in one area and cooperated in garden work and cattle herding.

References to the sub-tribes, clans, and lineages have been made here in the past tense, mainly because they no longer function in the traditional manner, with the exception of lineages. The functions of the sub-tribes and clans have been usurped by local government and churches, and some of the activities of the lineages,

as for example in marriage ceremonies, have been abandoned or altered. Residence patterns, settlement of disputes, and cooperation in economic and ritual activities still are closely allied with or based on lineage affiliation. Significant aspects of a person's daily life, then, are affected still by his kinship network and lineage affiliation.

Some changes in the patterns of behavior and of interaction within the family unit have been brought about by Westernization, but many basic features have remained relatively stable. The men's activities still compel them to be absent from the homestead much of the time, attending meetings, court cases, and community affairs. They continue to do the more difficult agricultural work, such as preparing the soil for planting, and they are responsible for any construction or repair work on the buildings in the homestead.

The women are charged with the responsibility for most of the agricultural work and with the preparation of food and brewing of beer. The older girls assist their mothers in their work, and they are also usually responsible for the care of the younger children.

Nowadays, the boys attend school for the greater part of the day, and their traditional activity of cattle-herding has been limited. After school hours and on holidays, they are still charged with the task of grazing and watering the cattle. They also assist with the

agricultural work. The younger children are given menial tasks such as fetching water from the river, collecting firewood, assisting with food preparation, and keeping the compound clean.

Aspects of intra-familial interaction will be discussed in detail in the following chapter, and consequently the issue will be ignored here. It may be noted, though, that in traditional society, and to a large extent in the present, there was a clear pattern of expected behavior between people who stood in certain relationships to each other. The two dominant features in this system were relative generation and sex.

Generational seniority is basic to the maintenance of the social organization. Older men have ritual and economic control over the younger men (this is less true today) and correspondingly, any older man traditionally could give an order to a younger man and expect that it would be followed. Social position based solely on age provided an individual with a set of rights broad in scope and relatively inflexible in their application.

As the Luo are patrilineal and have patrivirilocal residence, the social position of women, overall, is much lower than that of the men. The comparison is not entirely apt, as in effect, a different set of duties, rights, and obligations are expected of the women. In social and ritual terms, they have fewer rights than the men, but in terms of the day-to-day operation of the

homestead, they occupy a central niche (cf. Southall 1952 for an analysis of the position of women in the lineage system).

1.3 RESEARCH AREA

The research was conducted in the Ulanda clan of Alego sub-location, Sakwa Location, Homa Bay District. Ulanda is located at the southeastern tip of Sakwa Location, and it is bordered on the north and east by Masai territory and on the south by Kanyamkago Location (another Luo sub-tribal area).

Ulanda represents one of the outlying areas in Homa Bay District that has been settled only recently. The first settlers came to the area in 1927 from Alego Location in Siaya District (formerly Central Nyanza), and the main period of settlement occurred in 1939-1942. That the settlement of the area has been recent means that land, initially, was more plentiful and that correspondingly individual units are much larger than homestead areas in other parts of Luo land. Consequently, the homesteads are relatively more isolated, and the people are relatively more secure economically.

Alego sub-location is located at an altitude of approximately 5000 feet above sea level, and it enjoys an average annual rainfall of 50 inches. The abundant rainfall and temperate climate allow the people to harvest two crops annually, a factor contributing significantly to their enhanced economic position. In more

arid areas of Nyanza Province, only one crop may be harvested annually, and the soil is generally of a poorer quality. The major cash crop in Alego sub-location is sugar cane, and the major subsistence crops are maize and, to a lesser extent, millet. Some cattle are kept, but due to the proximity of the Masai, who are traditional cattle raiders, the Luo are often raided and some people keep no cattle at all because of the danger.

The size of Ulanda clan territory is estimated to be approximately $1\frac{1}{2}$ square miles. Within this area are located 60 homesteads, with a population of 362 people in 1967. Of the 362 people, 62 were men, 88 were women, and 212 were children. Although ethnographic data were collected from all 60 homesteads, only 15 of them were included in the primary sample unit. As indicated, 38 children were included in the sample, but the eight children in the present study each came from a different homestead.

1.4 RESEARCH PROGRAM

The research was conducted according to the designs and goals of A Field Manual for Cross-Cultural Studies in the Acquisition of Communicative Competence (Slobin 1967). The major objectives of the study will be recounted here, followed by a brief "natural history" of the research endeavor. The latter is included in order to recount the procedures and techniques employed

in the course of the work.

1.4.1 Objectives of the Research. As the present study is concerned only with a portion of the overall sample of children and consequently has a more limited set of aims, a complete listing of the objectives of the research would be superfluous. The general goal of the study, however, was to collect information on the acquisition of language, the competency required for the generation of language, and on the acquisition of competency in the use of the language.

In brief, the goal of the study was to provide a description of the progression of a Luo child from an infant with a severely limited repertoire of vocal signals to a fully competent speaker of the Luo language. Toward that end, a description of the acquisition of communicative competence by the Luo, an initial sample of 24 children was selected from the Ulanda clan, and the children were visited periodically over a period of nine months. Fourteen children were added to the sample later in order to provide data on intra-cultural variability and to fill "gaps" in the age ranges of the initial sample.

An effort was made to adhere to the suggested age and sex distribution in the sample as instructed in the Manual (1967:3). The ages of the 24 children in the sample corresponded closely with those suggested in the Manual, and the age range of 6 months to 13 years was

present. In the present analysis, only children in the age range of 7 to 35 months are included. According to the instructions in the Manual, children C and D were to be of indeterminate age, but were to be in the one-word stage and have a limited vocabulary (3). Due to the difficulty in ascertaining the level of speech development in the early stages of the research, the levels of both C and D were underestimated. When this fact was discovered, two children, A2 and B2, were added to the sample as a corrective measure. The children in the present study, their age ranges during the research, and their sex are given in Table 1.

Table 1: Distribution of Children by Age and Sex

<u>Child</u>	<u>Age Range</u> (in months)	<u>Sex</u>
Ogotu (A)	7-12	M
Wanga (B)	8-15	F
Othieno (A2)	15-19	M
Aoko (B2)	17-22	F
Ochieng (C)	25-32	M
Risper (D)	21-28	F
Rabuogi (G)	27-34	M
Akinyi (H)	28-35	F

The major research tasks outlined in the Manual that were appropriate for the eight children were as follows: II. Record babbling; V. Elicit and list

initial vocabulary; VI. Record free interaction between child and mother (or mother-surrogate) for intensive grammatical analysis; X. Describe child's interaction networks and standard daily activities...; XI. Record and observe dialogs between children; XIII. Observe communicative routines; and XIV. Interview adults concerning beliefs about language acquisition (1967:2).

On the basis of these tasks and the information collected, an attempt has been made here to provide answers to specific questions as: 1) at what age does babbling terminate; 2) at what age does the use of one-word utterances begin; 3) what are the characteristics of the one-word stage; 4) when does the two-word stage begin, and what are its characteristics; and 5) what are the features of subsequent grammatical development? In addition, information is provided on the general nature of speech socialization, and on the acquisition of rules governing the use of speech.

In brief, the major objectives of the analysis are: 1) to provide a description of the acquisition of language in terms of categories acquired, by Luo children in the age range of 12-35 months; 2) to account for their linguistic competence in the generation of their language; and 3) to illustrate how social settings alter the linguistic performances of the children. The third objective assumes primary importance in the study, as an exposition of 1) and 2) are directly contingent on

the children's speech as performed in a social environment. Social factors governing the use of speech in Luo society impinge on the data collecting process, and they consequently affect measurements of competence.

As will be seen, social rules for behavior need not be internalized by the child in order for his speech to be socially constrained or regulated. External factors also pose methodological problems. Examples of such features in Luo society will be considered in Chapter 2, but some background information will be provided here in a brief record of the fieldwork procedure.

1.4.2. Plan of the Field Research. The initial two months of the research period were devoted almost exclusively to study of the Luo language, working both with texts and informants. The third month was occupied with observations of nursery school children (ages 4-7 years) at the Ulanda Catholic Mission.⁴ Work also continued toward acquiring the language. Months four through six were spent in collecting census information from the people of Ulanda clan. Particular emphasis was placed on collecting information on the children. During these months, the visits to the homesteads also served as a means of introduction into the community and provided opportunities for explaining the research to the people.

Once the census was complete and it was possible to select appropriate children for the study, regular visits were begun to homesteads for the purpose of collecting

speech data. Visits continued on a periodic basis for the remaining eight months of the study.

The visits to the homes of the eight children were made under remarkably uniform social conditions. All of the interaction with the children was in the homestead, and in most cases at least one parent was present. Usually all three researchers were present, although at times, only Okumu and/or Oyugi visited the homes. Almost all of the verbal interaction with the children was initiated and sustained by Okumu, although due to social factors and to the elementary level of the children's linguistic ability, initiation and maintenance of conversation was difficult.

A number of techniques were tried in order to stimulate the children to talk. They were encouraged, for example, to play games, such as building houses from maize cobs, and to tell stories, sing songs, etc. None of these attempts were successful. In order to minimize the influence of the visitors' presence, the parents attempted to engage the children in conversation in a secluded area where a tape recorder was in operation. This technique met with only limited success, as the children often refused to talk at all.

1.5 PLAN OF THE PRESENT WORK

Organizational features of Luo society, such as relative isolation of homesteads, restricted mobility of

the children, and the allocation of duties in child care, all relate to the children's communicative routines. In addition, social rules governing the use of speech have an effect. Chapter 2 provides an analysis of some of these organizational features and rules.

In Chapter 3, the linguistic development of children A, B, A2, B2, C, and D will be considered. Focus will be on acquisition of lexical items and on the early stages of grammatical development. In Chapter 4, the speech of children G and H will be described, and continued grammatical development will be noted. In both of these chapters, analysis of grammar will be restricted to considerations of sentence surface structure.

Chapter 5 will present a summary of generative grammar theory, and then the children's utterances in the age range of 19-35 months will be analyzed within this framework. Statements of the linguistic competence of the children will be given, and the order of emergence of specific grammatical categories will be provided.

In Chapter 6, the concluding chapter, a summary of the linguistic development of the eight children will be summarized, and the account of the development will be placed within social contexts and related to social constraints as they effect the performance of the children. In the discussion, acquisition of speech in terms of functions expressed will be considered, as well as the acquisition of some aspects of social awareness by the

children. Concluding and additional remarks will then follow.

CHAPTER 2

METHODOLOGICAL CONSIDERATIONS

2.1 INTRODUCTION

Linguistic competence is a fundamental concept in generative linguistic theory, and a second concept which is sometimes confused with competence is linguistic performance. In linguistic analyses, the two are kept conceptually distinct, and an analysis of competence may proceed in the absence of considerations of performance. In studies of language acquisition, however, in which a description of the acquisition of linguistic competence is a primary goal, considerations of performance assume a more central position. In order to ascertain the reasons for the emphasis on performance, it is necessary first to consider the concepts as they are defined linguistically, and secondly, to consider the methodological features of the description of competence from the point of view of acquisition.

The plan of the present chapter is to provide the definitions of competence and performance, to discuss their relationship in the context of language acquisition, and to illustrate with a discussion of Luo children's speech behavior some methodological considerations necessary in empirical studies on language acquisition. The central argument of the presentation will be that linguistic information per se will not suffice for a description of

the acquisition of competence. Contextual information, particularly in the form of social constraints on speech behavior, is required for a more precise measurement of competence.

2.2 LINGUISTIC COMPETENCE AND PERFORMANCE

2.2.1 Definitions of Competence and Performance. The basic distinction between competence and performance has been stated clearly by Chomsky:

"Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention, and interest, and errors(random or characteristic) in applying his knowledge of the language in actual performance...To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one...We thus make a fundamental distinction between competence (the speaker-hearer's knowledge of his language) and performance (the actual use of language in concrete situations). (1965:3-4).

In other words, competence represents an abstraction away from performance. It represents a native speaker's

linguistic intuition, the knowledge he must have in order to understand any of the grammatical sentences of his language. Performance is the expression of competence, subject to various types of constraints, such as memory. In relation to grammar, questions of how a speaker might proceed in some practical or efficient way to construct a certain derivation of a sentence to a particular generative grammar belong to a theory of performance, but the important point in this theoretical framework is that such a theory of performance must ultimately be based on a generative grammar that expresses the speaker-hearer's knowledge of the language (cf. Chomsky 1965:9).

2.2.2 Competence and Performance in Child Language. The role of linguistic intuition as the final arbiter of grammaticality is diminished when attempts are made to characterize children's early grammatical systems. The basic problem is that there is no readily available system of reference, that there is in fact no convenient way to consult the child as to what constitutes his linguistic intuition. An example, which has come to be called the "pop goes the weasel effect", well illustrates the problem. Roger and Ursula Bellugi reported the following dialogue in their attempt to tap a two-year old child's knowledge of plurals (1964:134):

Interviewer: "Adam, which is right, 'two shoes'
or 'two shoe'?"

Adam: "Pop goes the weasel!"

The problem of a frame of reference in relation to the child's linguistic competence has even more complex roots. The core feature has been stressed by Chomsky in the following manner. "There is surely no doubt that the child's achievements in systematizing linguistic data, at every stage, go well beyond what he actually produces in normal speech" (1964:39). Information about the types of sentences a child is able to understand and respond to appropriately shows that his basic linguistic competency exceeds that represented in "telegraphic speech", that a child using telegraphic style "can be shown to have an underlying, fuller conception of sentence structure (unrealized in his speech, but actively involved in comprehension) if misplacement of the elements he does produce leads to difficulties of comprehension, inability to repeat, etc., while correct placement gives utterances intelligible to him, and so on" (1964:39). In other words, the utterances generated by a child will provide only a partial record of what his underlying competence is. For a more adequate account, both a comprehension model and a production model are needed.

While acknowledging the need for a comprehension model, focus in the present analysis will be solely on production. Motivation for the selection of production

is that as yet no reliable cross-cultural technique of measuring or judging comprehension is available for children in the age range of the study. Immediately obvious techniques as testing a child's ability to follow instructions do not necessarily tap the child's competence, as his information may be derived from the recognition of a single lexical item in the instructions and not from a decoding of the grammatical input. In any event, no attempt is made in the present discussion to account for the children's comprehension.

Turning now to the problem of accounting for competency in the production of grammar, viewing competence in relation to the concept of performance, one possible approach to the problem is to ask the question "what is the complex of features which a child is expected to manipulate in order to communicate effectively?" By "complex of features" is meant the child's lexicon, grammar, and the various cultural rules and social constraints placed on his verbal behavior and which decree the social appropriateness of the behavior. In other words, specific forms of verbal behavior may be expected of the child by adults in designated situations, and the question becomes "what does a child need to recognize in order to behave according to the expectations?" The question of how well the child recognizes and manipulates the features may then be examined empirically. A diachronic study of the child's ability to observe social rules, i.e. a description of the acquisition of sociolinguistic rules,

will not be expounded here, but synchronic descriptions will be given in order to illustrate the interaction of language and context in producing speech. Accounts of some of the variables related to the production of speech, and ultimately affecting performance will be provided, with the express intent of showing the relationships, methodologically, between social rules, production, performance, and competence.

2.2.3 Social Rules and Production. It should be stressed that the relationships among the four concepts of social rules, production, performance, and competence as discussed here are not meant to hold universally, although one would expect that relationships of one type or another would be universal, in that children with context-free language would be culturally aberrant. The essential point in discussing the four concepts is that the social rules for the speech of the Luo children are such that production and performance are affected in a manner so as to limit severely the amount of information available from which inferences about competence can be made. In order to arrive at an even partially adequate account of linguistic competence for children, it is necessary to have some knowledge of Luo culture. One would expect that this restriction would hold for any society, i.e. that cultural knowledge is prerequisite for an account of the acquisition of linguistic competence, but the nature of the knowledge that would be required would vary from society to society. For any one society, then,

there must be an ethnographic description of the communicative routines of the children and the relation of the routines to the data collection process.

As performance is embedded in a cultural matrix, an ethnographic description of performance-related routines should include the major features of the culture which regulate communicative routines. It is expected that in the socialization process, a child would eventually acquire the rules which allow him to communicate competently in his society, but the regulation of his speech in the early stages is not always dependent on the internalization of the rules. As an extreme example, a child may simply be prevented from talking in certain situations by being physically removed for violation of the norm that dictates silence on his part.

2.3 SOCIAL CONSTRAINTS ON CHILDREN'S SPEECH

As a way of introduction to the account of communicative routines for Luo children and the concomitant restrictions on data collection, some experiences of researchers with English-speaking American children will be provided. The behavior of the American children furnishes a striking contrast with that of the Luo children.

Studies on American children have shown that the onset of two-word utterances is characteristically in the age range of 18-24 months. It was expected that the onset for Luo children would be in the same approximate range, and a

number of children in the sample were visited regularly in order to gather speech samples at the beginning period of the stage. The age of onset of two-word utterances corresponded fairly closely with that of the American children, but there was a striking difference in the number of utterances they seemed to make freely or spontaneously. Braine, in his study of American children, recorded the number of different word combinations for one of the children in his sample over a period of seven months as 14, 24, 54, 89, 350, 1400, and 3500+ (1963:2).

In another study with American children, Brown and Fraser reported the following. "We hoped to get as much speech as possible in as little time as possible and to have examples of the full variety of sentence types the child could produce. There were those who warned that the child would be shy and speechless in our presence; this was not the case. Mothers told their children that visitors were coming and, in general, we were eagerly welcomed, shown a parade of toys and games, and talked to steadily. It became clear that the child expected a guest to put in some time as a playmate, and so the recording was a two-man job with one of us taking data and the other prepared to play cowboy, horsie, coloring, trains, and the mule in 'Kick the mule'" (1964:51). In a period of a few hours, Brown and Fraser were able to obtain for all six subjects a speech corpus of a minimum of 500 different utterances. (1964:52).

In the Luo sample there were six children in the sample (A2, B2, C, D, G, and H) who were at one point during the course of the study in the appropriate age range. Altogether the children were visited a total of 54 times. The visits varied in length from 15 minutes to one hour, with the majority being approximately 30 minutes, and the visits were made at different times of the day so as to attempt to collect speech samples over a wide variety of circumstances in the daily routines of the children.¹ As noted earlier, a variety of techniques also were used in attempting to collect the data, such as trying to persuade the children to teach us games, to tell us stories, etc., but these were all singularly unsuccessful. Despite the large number of visits, the variation in time of the day when visits were made, and props for stimulating speech, the number of two-word utterances collected for all of the six children was less than 200. Compared with Brown and Fraser's collection of 500 different two-word combinations per child, the Luo sample is remarkably small. The disproportion is sufficiently large so as to indicate gross differences were involved in the collection process, derived from the differences of what was deemed to be appropriate behavior in the two societies.

2.3.1 Behavior in the Presence of Strangers. In search of an explanation, perhaps the most logically immediate one is that my presence as a stranger rendered the children shy and speechless. This explanation has merit, particularly for the early stages of the research when visits to the

homesteads were first made. The youngest children, those in the 6 months to 2 years age range, without exception were frightened by my presence. The older ones reacted by crying and sometimes running away to hide in the house or behind it. Even after several visits were made to the homes, the children would show no outward manifestation of fear, but they would not talk at all. Their parents invariably would interpret their speechlessness as a sign of fear, saying that I still was strange to them, and they were being cautious. The parents also explained the children's fear by reporting that they had never seen a non-African before, and they were afraid because of my different appearance.

A factor contributing to the children's reaction to strangers is their restricted mobility. Very young children (below four years old), as a rule, do not have a great range of mobility, due in part to the type of Luo settlement pattern. Briefly, the Luo live in comparatively isolated homesteads, which are separated by distances ranging from twenty to several hundred yards. Usually the homesteads are organized spatially into clusters on the basis of kinship relations. Clusters of homesteads are separated by distances ranging from a mile or more to a few hundred yards, but within a cluster, the homesteads are also separate units. As noted in the Introduction, a homestead typically is surrounded by a tall euphorbia hedge, and there is only one entrance to the compound. The homestead is, effectively,

a single social unit. Children, especially the younger ones, spend the majority of their time inside the compound, playing with their siblings or caretaker.

While a child may visit the nearest homesteads, there usually will be no more than one or two within the permissible range of his mobility. Even then, there may be socially motivated restrictions on his mobility. Disputes among household heads sometimes lead to suspension of social interaction among the members of the households, so that children from homesteads separated by only twenty or thirty yards are prevented from playing together.

Luo children, due to residence patterns and restricted mobility do not come into frequent contact with many strangers. There are, of course, strangers who come to visit at the homestead, but the proportion of these is negligible in comparison with the number of regular visitors. S. H. Ominde, in his study of the social development of Luo girls, stresses this point. He states: "Children of two to five know very few people beyond the members of their own family circle. Thus Obala, at three years old, did not know who I was, although I had been to her home and talked to her many times. Her parents told me that this was due to their never having told her my name." (1952:11) It might be added that strangers may contribute in indirect ways to the children's reticence to interact with subsequent strangers. In some cases, the children's fear of our presence was interpreted by their father as their reaction to the fear of being inoculated.

The sudden appearance of strangers in the compound in the past had meant that the children were going to be innoculated by local medical authorities. The children generalized their past experience to interpret the intentions of all strangers.

Another factor which restricts the children's mobility is the practice of Luo mothers or mother-surrogates of telling children that they will be taken by a lion or by a Jalano if they stray far from the homestead. The term Jalano, in this particular area, was a reference term for Masai, who had a common territorial boundary with the Luo. The children are cautioned also to be wary of strangers who visit the homestead when the parents are away, again for the same reason, i.e. that the children may be stolen. Although in more traditional times, according to reports of elder informants, child-theft was a danger, it ceased to be so many years ago.

Historically and culturally, there are sound bases for xenophobic behavior on the part of the Luo. All of the tribal groups in the East African cattle area, of which the Luo are a member, exhibit such behavior (as do pastoralists in other regions of the world; cf. Barth 1966). The ethnographic literature for East African pastoralists is replete with accounts of tribal xenophobia (cf. Evans-Pritchard 1940), but rather than reviewing the material here, it will suffice to indicate that cattle raiding is the root phenomenon in the complex of forces generating xenophobic behavior.

Any cattle-herding group was, traditionally, subject to frequent cattle raids, and the presence of a stranger in the area would render him suspect automatically as a spy or cattle thief. Even within tribal groups raiding occurred, with clan pitted against clan. In the raids and resultant warfare, plundering and taking hostage of women and children was frequent, in which cases, the children would be incorporated into the raider's lineage. The restriction of mobility of children therefore had the sound practical basis of minimizing exposure to danger.

In areas where cattle raiding is no longer practiced, the reduction of xenophobia has not necessarily proceeded apace. Inculcation in children of fear of strangers is still an important part of the socialization process, based on information collected in informal conversations and from interviews with parents on child-rearing practices.

From observations, it appeared that Luo children behaved as they had been taught. During the first visits to the homes, I was struck by the fact that older children (5-9 years of age) upon seeing us approach the homestead, would gather the younger children into the house and keep them there as we passed through the compound on the path to another home. If we stopped to converse, the oldest child would act as spokesman, while the younger children remained in the background in the safety of the house.

Fear of strangers, then, is an element acting to restrict verbal behavior of Luo children. For very young children,

a fear response is probably universal, an expression of an adaptive value. As the child grows older, the response is overlaid and ameliorated by cultural factors. The Luo capitalize on the response in their socialization practices as a mechanism for limiting the mobility of the child and thereby insure his safety. Traditionally, he was protected from marauders, and there is the auxiliary advantage of preventing him from becoming lost or possibly coming into contact with harmful animals or insects.

2.3.2 Behavior in the Presence of Visitors. The fear response was not the only factor responsible for constraining the speech of the children in the presence of the researcher, and moreover, its strength diminished with the passage of time and repeated visits to the home. By visiting the homes repeatedly, the social position of the researchers became that of visitors, not strangers, and the appropriate behavior of the child vis-à-vis visitors was exhibited.

There are socially appropriate ways in which children are to conduct themselves when visitors are present, and the children are taught the behavior by practice. According to Luo etiquette, everyone in the homestead must come and greet a visitor who has arrived, both verbally and by shaking hands. Children who cannot talk yet and are barely able to toddle are taken through the routine of shaking hands even if they have to be assisted physically by an older person. Children then leave the immediate area to continue with their previous activity or to play, and the adults converse without any interference from the children.

Sometimes the children remain present, but they are silent for the duration of the visit. The older children are taught explicitly the proper way to behave in the presence of visitors. Informants, in response to the question "Do you teach children what to do when visitors come?", always answered that they instruct children that they should be polite, greet the visitor, and then go away to leave the adults to their conversation. The children have received training in advance, for pre-verbal age children are taught the behavior by example. They are always in the care of an older child, even if the child is not a sibling but a relative who has come to live at the younger child's home to act in the capacity of nursemaid. The older child, who observes the rules, provides a model for the younger children, and he also is responsible for seeing that the younger children follow the rules. The net effect on the children's behavior in the presence of adults, regardless of the age of the child, is to reduce greatly, if not eliminate altogether, the verbal output of the child.

It was explained to the parents of all of the children in the sample that our purpose in being there was to study language development in children, and it therefore became acceptable, within limits, to have the children present when we visited. During the visits, though, it was first necessary to make polite conversation with the head of the homestead for a period of 10-15 minutes. When it was permissible to interact with the child, it was necessary

to attempt to collect his speech in the presence of the parents. To have suggested that we wanted to talk with the child in private would have been not only a breach of etiquette, but would have aroused suspicion about our intentions. Traditionally, enquiries about children, their ages, activities, etc. could be done only among very close friends and relatives. The only other category of person wanting information about the child would be someone who would put the information to evil use, as e.g. a sorcerer.

As matters were, there was a limit on the amount of time that the adults could be expected to sit patiently while we interacted with the children. A more severe hindrance to our task of collecting speech samples was that the children were faced with the task of performing in a situation which created role conflict. They had been taught by example and precept that such behavior was not permissible, and they were being asked to momentarily suspend all prior training. Not surprisingly, the children were reluctant to transgress the norms, and the result was severely restricted speech behavior.

To fully appreciate why the norms of behavior for a host are strongly sanctioned and why violations are serious, it is necessary to know something of the place of visiting in Luo society. It is not feasible to give a detailed analysis here, but it may be noted that visiting is a daily phenomena in the life of the Luo, and a high premium is placed on it. Luo men spend many of their after-

noons and much of the weekend, in short, most of their free time, visiting at nearby homes to converse and drink kono, the traditional millet beer. The women also often visit with women from nearby homes whenever their work schedule permits. In brief, all of the Luo are expected to be regular visitors and hospitable hosts when they in turn are visited. To violate this code of conduct, to make oneself unavailable for social intercourse, is to indicate that one's intentions must be evil, i.e., that there is something to hide, which by definition can only be detrimental to the group. To behave in such a fashion arouses suspicion, fear, and hostility, and it has the effect of ostracizing a person from the community.

In a society where the dictates of subsistence and defense require a high degree of cooperation, a course of action by an individual against the group is simply not tolerated. An individual requires the assistance of his kinsmen, not only in subsistence matters as preparation of land for planting, but for support against opposing groups, who may, for example, attempt to take his land or cattle. In short, a person cannot lightly ignore his responsibilities as a visitor and as a proper host. He cannot afford to alienate his kinsmen and neighbors.

2.3.4 Child-Adult Interaction. Other features of Luo society regulate and shape children's verbal behavior. To consider some of these, it is necessary to focus on aspects of Luo children's position in society.

2.3.4.1 Constraints on Children's Behavior. The behavior of children vis-à-vis adults in visiting situations has been noted, and it may be taken as a rough indicator of the child's relationship with adults in other situations. The relationship is essentially hierarchical, i.e., one of superordination and subordination, and a feature of the relationship marked in interaction is mutual respect. The basic Luo attitudes on the issue can be shown in the following account. One question asked of adults in the language belief interviews was "Should children speak differently to adults than to other children?" The answer invariably was "yes", and when the informants were asked to elaborate, they replied that children should be polite and show proper respect. They also should be direct and precise in their speech, avoiding joking and frivolous topics, and they should not raise their voice, shout, or in general be boisterous. They also should show respect by not looking the adults directly in the eye when talking to them. Observations of adult-child interaction confirmed the operation of these behavioral features. It should be noted, however, that the implication is not being made that all adult-child interaction is of that type. Obviously there are more intimate aspects of interaction, but their intimate nature precluded any frequent observations of their manifestations. The majority of observed adult-child interactions conformed roughly to the model sketched above, which was to be expected if the presence of a visitor was counted as an important factor

in the definition of the speech situation as a whole.

One further point to indicate what the model for children's behavior is general in Luo society is that the question in the language belief questionnaire was intentionally 'open' rather than 'closed,' and yet there was near unanimity in the answers given. Rather than postulating specific situations and asking the informants how a child should behave in them, the informants were allowed the freedom of expressing how they felt that a child should act in general situations, or if they so desired, of stating how the child should act in particular instances. None of the informants chose to give specific instances, but rather chose to answer in a general way, and when they were asked about variations in mode of behavior, they replied that there were none. Children always were supposed to show respect.

The rigidity of adherence to the constraints on respectful behavior varies situationally, and for children, according to age, but the general claim can be made that respect is a non-variant feature in social interaction between actors of unequal status. An analysis of even the major situational forms of the behavior is not feasible here, and in addition, the internalization of the rules for the various forms has not yet been established for children in the earliest periods of speech development. The net effect of the general feature of respect, however, is to reduce the verbal output of the child in the presence of adults and particularly when the verbal interaction must be with adults. The cardinal rule

is that children do not interrupt adult activities, and young children who have not mastered this feature of behavior follow it by fiat. Their nursemaids, held responsible for their behavior, effectively prevent the children from violating the rule.

Children's speech is limited, then, in the number of utterances they can make freely in the presence of adults and, furthermore, it is limited by stylistic constraints. The dominant feature follows from the requirement that children be direct in their speech to adults. The directness in their speech is reflected by a low number of morphemes per utterance, as compared with casual child-child speech. There are other stylistic constraints, as e.g. low pitch, but the essential feature for the present discussion is that the required respect of children for adults is coded stylistically in the language, and the respect has the overall effect of severely restricting the flow of spontaneous speech of children in the presence of adults.

The hierarchical nature of adult-child interaction and the consequent restriction of spontaneous speech posed extremely difficult problems for the collection of speech samples. Attempts to bypass the restrictions placed on interacting with visitors or strangers by enlisting the aid of parents was usually not successful. First there was the problem of enlisting the parent's aid, which was no simple matter, but even in cases where this problem was resolved, the hierarchical relationship still prevailed,

and the speech still was constrained. For example, in several instances, the tape-recorder was left in operation in the presence of a mother and child or father and child, but the parents were unable to elicit even a single word from the child. Most likely, the child recognized the situation as "unusual", that it was not a typical everyday occurrence, and he consequently switched into a style of behavior that permitted him, appropriately, to do nothing.

2.3.4.2 Constraints on Adult Behavior. Having considered the child-to-adult-relational features on the theme of mutual respect, the adult-to-child features can now be considered. To begin with, the Luo have a general attitude toward the children and their behavior, which they express as the children "living in a world of their own". The children have activities of their own, created and sustained by them. Several informants remarked on this aspect of the children's daily life, and in relation to the are of language, many informants were in agreement in answer to the question "From whom does a Luo child learn most of his language?" that they learn their language from other children. As they pointed out, children spend most of their time in the company of other children and not with adults, and it is to be expected that they learn from them. Luo children are left, in effect, to their own devices much of the time, so that in some respects they do live in a "world of their own".

Luo men are frequently absent from the homestead. In the mornings, they may be engaged in such activities as doing the heavier work in the gardens, either in their own or others' fields, attending meetings, such as court cases or perhaps going to market. In any event, they as a rule are not at home in the morning, unless there is some specific activity to keep them there, such as repairing the house or granary. In the afternoons, the men frequently are visiting at other homesteads. When they are at home, visitors are often congregated there, and there is little or no interaction with children, as they are excluded from the company of the men.

Luo women spend the vast majority of their mornings working in the gardens, an activity, again, from which children are excluded. In the afternoons, the women continue to work in the homestead, and there is more opportunity for interaction with the children. The women also often visit with women from nearby homesteads in the afternoons, and they spend some afternoons at nearby markets, so that in effect, they are often away from home. Of course, the women do spend considerable time in the homestead and they do interact frequently with the younger children, as do the Luo men, but the important point is the attitude of the parents as to how much time is spent interacting with the children, their conception of the allocation of responsibility for the child's behavior and how he is engaged in the course of his daily routine. That Luo adults are

frequently not in the immediate vicinity of the homestead implies that the children are expected to be able to take care of themselves and that this feature of life is taken for granted by the adults. As an extreme instance of the degree to which this behavior is taken-for-granted, the adults will sometimes attend a funeral for several days, leaving the children at home to assume responsibility for themselves.

Allowances for age are made, of course; a small child will not be left to fend for himself. A mechanism is employed for assigning responsibility, which may be stated simply as "any older child is responsible for the welfare of a younger one". For the very young children, less than three years of age, the allocation rule is more explicit. An older child, preferably a girl in the age range of 6-12, is assigned to be the child's japidi "nursemaid", and in the absence of the parents, and even during much of the time when they are present, the japidi has primary responsibility for the child. If the child is neglected, harmed or commits some offense, his japidi is held accountable. Luo children are socialized early to assume responsibility for their younger siblings. It is not unusual, for example, for a 5-6 year old child, as he goes about his daily activities, to carry with him on side or back a younger sibling.

Luo children, then, as a group, are largely self-sufficient and much of their time is spent in the company of other children. One aspect of the separation of adult

and child activities is that clear boundary markers are provided to demarcate the areas in which interaction is not socially appropriate, or conversely, where it is required. As an example of the latter, all the males, young and old, in a homestead eat their meals together (unless a visitor is present, in which case the young boys eat separately), and the females have their meals together as a group. As clearly stressed, the presence of a group of men in the homestead is a clear indicator for children that they are not to interact with the men, except ritually in the form of greetings and in leave-taking behavior. In cases where children are asked to make an exception to the rule, the request is often phrased in such a way as to communicate to the child that he may interact with the adults. As will be seen, the child is not obligated to interact. He has an option, and more often than not, he chooses not to participate.

The most common way of signalling to the child that he may talk with visitors is the use of the term ane, which may be glossed as "please", but the term is not general in its use, i.e. it is used only in speech to children. The phrase bi ane omgra "come (here) please my friend/brother" or bi ane nyaAlego "come (here) please daughter-of-Alego (a term of respect)" were standard opening remarks in such cases. Parents, in attempting to persuade their children to talk with us, often would state wač ane kod msungu "talk please with European" (cf. pp. 62-66).

Informants notes, repeatedly, that in order to persuade the children to talk, we first would have to please them, and being polite was one necessary factor in the process. In addition to the use of the term ane, another way to "please" the children was to use a nickname or a term of respect, such as omera or nyaAlezo. A nickname would be used in the same fashion as omera. As an example, the father of one of the children in the sample repeatedly called the child by his nickname, Nyambuoro, explaining to the researcher that he was attempting to cajole the child into talking with us.

As clearly indicated above, a Luo child had the option of not talking, which he frequently exercised. Failure to interact verbally in such sentences brought no reprimands or reprisals from his parents. The strongest type of statement to be made would be of the order "if you don't talk, you won't get any candy", but even a remark of that kind was rare. After failing to persuade their child to talk, parents would state, simply, ogomo or odagi "he refuses", and nothing further would be said.

2.4 SUMMARY AND CONCLUSIONS

The major characteristics of the speech behavior of Luo children may be summarized in the following fashion, but with the prior qualification that the model described represents the speech behavior of the children from the point of view of a visitor, i.e., in terms of the behavioral

configuration which has as a basic component the feature in-the-presence-of-visitors. Most likely, the model is more general. It probably represents in rough outline the broader dimensions of child speech, but the problem under consideration is the nature of the data collection process, and the basic factor in the process was the effect of the presence of visitors on the speech of the children, i.e. the in-the-presence-of-visitors model will suffice.

The first rule for speech behavior of children is that they are not to engage in conversation with adults in the presence of visitors. For the youngest children in the sample unit, the rule is observed de facto. Initially, a fear response prohibits interaction, capitalization on the response is made through social reinforcement, and this in turn is reinforced by the children's nursemaid, who keeps them physically removed from the adults. As the children grow older, they internalize the rule and observe it as an assumed background expectancy.

When speech is directed to an adult, in the presence of other adults, and, according to informants, in general, the correct mode of speaking is to be brief, direct, and in terms of style, subdued. The net effect is a reduced verbal output, which is characterized by a low number of morphemes per utterance.

The number of constraints which a child must recognize and adhere to are reduced in casual speech, in intermediate form in casual situations with adults, as

e.g. at meal-times, when the child initiates conversation but observes stylistic constraints, and in more complete form in interaction with peers.

Viewing this speech behavior model in relation to the competence-performance distinction, the earlier contention that measures of competence must be related to accounts of performance, production, and socio-linguistic rules seems valid. The extent to which competence can be inferred from performance follows directly from the nature of the performance model and its embedding in a cultural matrix. As an example, the competence described for the Luo children will be more limited and partial than descriptions for English-speaking American children at corresponding ages, because of the nature of the performance restrictions. The Luo description is essentially for non-casual for formal speech, dictated by the social rules governing the use of speech. For the English-speaking children, a different type of situation prevails, as indicated by the quotes from the studies with them. At any rate, it seems clear that the behavioral expectations of both children and adults in the Luo studies and those in the United States are markedly different.

The expectation on the part of the American children that the visitor was to put in time as a playmate would simply not be present for Luo children, and these differences in expectations affect drastically verbal interaction with the children.

In summary there are two main points to be stressed. First, cultural knowledge of a society is necessary for studies in language acquisition. In the present study, any description of competence must follow an account of the major rules governing children's speech. The basic rules are: (1) children do not interact with strangers; (2) children interact only ritually with visitors; (3) children interact formally with adults in the presence of other adults, according to a prescribed manner; and (4) children interact "freely" (with minimum constraint) with peers. The best account of the acquired competency for children would then come from samples of speech under conditions in rule (4). The data collecting situation could not be manipulated so that any systematic collection of data of that type could be carried out. Consequently most of the samples came from conditions as in (2) and (3).

The second major point is that, due to restrictions on the data collecting process, the accounts of language development in the following chapters must represent the minimal degree of development for particular developmental ages. The production information is limited, performance data is limited, and the inferred competence must also be limited. Despite this qualification, the analysis can demonstrate, however, important aspects of Luo language development, primarily in terms of the sequence of acquisition of various categories of language. Despite the fact that a particular category of language in the child's

development may be overestimated in terms of age of appearance and despite the fact that there may be gaps in the record, the overall sequence of acquisition and the general direction of language development should become apparent in the analyses.

CHAPTER 3

LANGUAGE DEVELOPMENT: 12-27 MONTHS

3.1 INTRODUCTION

Six children in the sample unit were in the earliest stages of language acquisition during the course of the research. Four of the children were in the babbling stage at the beginning of the research, and they provided some information on the transition to the one-word utterance stage. In addition, they provided data on the characteristics of initial vocabulary and on some features of earliest grammatical development. The two older children furnished speech samples which yielded more insight into vocabulary development and the acquisition of grammar.

Important aspects of each of the stages of language development, i.e., those characterized by babbling, one-word utterances, and two-word utterances, and the transitions between the stages will be discussed in the present chapter. Rather than initially segmenting into the component stages the data presented by each child, the linguistic development of each child will be presented in turn, so as to provide a continuum in chronological age and corresponding language development. Stages in the linguistic growth of the children may then be identified and discussed both in terms of ages at which they appear and in terms of the formal linguistic features associated with them. Studies with English-speaking American children have indicated that

chronological age is not as important a measure in the acquisition process as developmental age. Children at the same age chronologically may vary considerably in their linguistic ability, but the stages of acquisition in developmental terms are not variant (cf. Braine 1963; Bloom 1968). Linguistic competence will be correlated with chronological age for the Luo children, however, with the intent of identifying the extent of individual variation.

In each of the stages of development mentioned in the above general framework, specific questions will be addressed to the data. The ages of termination of babbling behavior and the earliest use of words will be sought. An approximation of the age range of the one-word utterance stage will be the goal,¹ as will the corollary of noting the age for appearance of two-word utterances. Characteristics of initial vocabulary will be described, according to the goals outlined in the Field Manual:

The aim of this exploration (initial vocabularies) will be to reveal (1) the extent and range of vocabulary, (2) the semantic domains named by the child, (3) the "innominate" zones, (4) the nature of generalizations of meaning, and (5) the extent of homonymity (Slobin 1967:15).

At the two-word utterance stage, a major focus will be on the acquisition of grammar. In the past decade there has been a flowering of interest and studies in the early period of children's grammatical development. Studies

by Braine (1963), Brown and Fraser (1963), and Miller and Ervin (1964) all have yielded remarkably similar findings on the initial period of grammatical development. A major finding of the studies was that in the speech samples of children at the two-word utterance level, the words employed by the children were not unstructured juxtapositions, but rather a distributional selection process was at work. Children's grammar seemed to be structured from the start, i.e. combinations of words and parts of words seemed to be systematic rather than random. A small class of words seemed always to occupy the same position in the utterance and to be combined with a large variety of a different class of words. For example, Braine found that one of the children in his study consistently used the term more in combination with such terms as cereal, cookie, read, high, and car to produce the utterances more cereal, more cookie, more read (meaning "don't stop reading"), more high (meaning "there's more up there" (more cookies up on the shelf)), and more car (meaning "drive around some more"). Likewise the term off was used consistently following such words as boot, light, and shirt, and the term allgone was combined with juice, shoe, and outside (said when the door was closed). (1963:5)

Braine, in his examination of the speech corpus, found that a number of terms almost always occupied the initial position in the utterances and that they occurred with any one of a large number of content words, mostly nouns and

pronouns. Characteristics of the latter class of words were that the number of words in its membership expanded rapidly, and that the words often occurred in the children's speech as single-word utterances. Braine called these items "open-class words" and the small, relatively stable class was designated "pivot words". A pivot word may be in the first or second position of a two-word sentence, as indicated by the examples above, but its position is usually fixed or stationary in the frame in which it occurs. In English, for example, the pivot word off almost always occupies the second position. The utterances of the Luo children will be examined with the view of identifying pivot constructions in their language and comparing their characteristics with those in English.

Attention also will be focused on morphological development. Morphology is more highly productive in Luo than in English, and one would expect that inflectional rules, and accompanying morphophonemic ones, would be acquired relatively early by the Luo children. The first uses of inflection by them will be noted and later development will be traced. Note also will be made of the use and development of negatives during this early period of language acquisition. Children's ability to handle "wh-" questions (where...? when...? what...?) also will be discussed.

3.2 PARENTAL REPORTS ON EARLY LANGUAGE

Two questions asked of Luo adults in the language belief questionnaire² were "What is the first word that Luo children are able to say?" and "How old are the children when they begin to say this word?" Thirteen people were asked these questions, and all but one replied that the first words were mama "mother" and baba "father", although there was some uncertainty in the informants' minds as to which of these terms appeared earlier. All were in agreement that the two terms appeared in the same month for Luo children, but again, there was some uncertainty regarding the age at which the terms typically appeared for Luo children. Nine respondents claimed that the words appear in the age range of 7 to 8 months; one gave the age as one year; and three replied that the words first appeared at the age of approximately two years. From a questionnaire on child-rearing practices, all the mothers of the children in the sample were asked the question "How old was ... when he first began to say 'mama' and 'baba'?" Again, essentially the same age range was represented in their replies, with a spread of 5 to 24 months. Of the 31 responses to the question, 16 were clustered in the range of 5-7 months, and the remainder were spread over the range 8-24 months, with a minor clustering of 5 responses at 18-19 months.

The qualification should be made that the reported information provides only a rough account of what Luo

adults report about the speech behavior of Luo children. The "measurements" are not exact, since the adults were trying to reconstruct from memory the ages of their children at the time when they first began to use mama and baba. Furthermore, what counted as "mama" and "baba" could have been the production of the sounds ma-ma and ba-ba rather than the terms per se. Later empirical evidence suggests that some mothers reported the ages for the former. Luo children characteristically begin to produce ma and ba sounds in their babbling at approximately six months. This may account for the clustering of parental reports in the 5-7 month range. Also from the available evidence, it appears that some children use the terms as early as 12-14 months, even though they continue to babble for several more months. Productive speech begins at approximately 18 months, at which time the use of the morphemes mama and baba are clearly distinguished, as babbling has ceased and monomorphemic utterances are prevalent. Eighteen months is the age for which the parental responses form the minor cluster in the sample. From this point of view, i.e. by making the distinction between the phones and morphemes, the parents' reports can be considered as essentially accurate.

Parental reports, then, can give some initial indications of the nature of child speech. The desired objective is a reconstruction of the development of Luo children's speech, beginning with some approximate notion of the age

at which words first appear, what these words are, and what the rate and nature of subsequent development is. In order to view this process more closely, the available empirical data can be supplemented with parental reports and cross-checked where possible. In the previous chapter it was noted that visits to collect speech samples from the youngest children in the sample were very unproductive, and in cases where little or no information could be collected directly, we were forced to rely on reports and interpretations of the parents or parent-surrogates. Information of the latter type is used only minimally to fill gaps in the record and with the restriction that judgments in highly subjective areas not be included. In essence, parental reports were used to supplement data on initial vocabulary development, i.e. as to whether a child used a particular term in his speech, and more complex questions concerning grammar were avoided.

3.3 SPEECH SAMPLES OF OGUTU (A1) AND WANGA (B1)

The two youngest children in the sample, Ogutu (A1) and Wanga (B1), were visited primarily for information on babbling and phonological development. Near the end of the research period, though, they began to use a few short words, and thus provided some data on the transition from the babbling to the one-word stage.

3.3.1 Ogutu (A1). Ogutu was able to produce [ma] and [ba] sounds at the age of nine months, and would occasionally

produce sequences of the sounds as [ma-ma-ma] and [ba-ba-ba]. There was no evidence that he was producing mama and baba at this age, but at 12 months, he was using the terms freely, and he had added a third to his vocabulary, the term miya. Miya is an inflected form of the verb miyo "to give", with a pronomial inflection -a "me", but of course it is highly unlikely that Ogutu was applying an inflectional rule. Rather, the term represented as a unit his expression of desire or wanting, and was generalized to cover all phenomena in that category. The following interchange gives an example of his use of the term. Ogutu's mother and older sister were attempting to induce him to talk and/or babble, and they were attracting his attention by jangling a ring of keys in front of him. He responded by extending his hand for the keys and saying "miya". He was given the keys, but his mother promptly withdrew them, saying

Miye kiɸungu. Itimi kode nade?

"Give-it key. You (will)-do with-it how/what?"

Ogutu shouted his reply, miya, miya as he was attempting to retrieve the keys from his mother.

The above information on Ogutu was collected on the final visit to his home, and there was thus no opportunity to continue with a study of his language development. His vocabulary at the age of 12 months was established as containing the three terms mama, baba, and miya.

3.3.2 Wanga (B1). Wanga presented a similar developmental picture. Her mother reported during the eighth month that

Wanga could say [ta-ta] but was unable to say [ma-ma] or [ba-ba]. We were not able to get her to utter any sounds during our presence at this age. At 10 months, she made the sounds [te-te-te] and [ne-ne-ne], but no [ma] or [ba] was evident. At 11 months, her mother reported that she could make many sounds, including [ma] and [ba]. By the fourteenth month, she was using mama and baba and was also able to say miya. She generalized the term to cover both receiving and giving. Her older sister offered her a piece of candy, and Wanga held out her hand for it, saying miya. After playing with the candy briefly, Wanga gave it back to her sister, again saying miya. A similar exchange occurred with a set of key-rings. Observations ended in the fifteenth month for Wanga and no new words were recorded for that month. From the available information, Wanga had a vocabulary at fourteen months identical with Ogutu's, consisting of mama, baba, and miya.

3.4 SPEECH SAMPLES OF OTHIENO (A2) AND AOKO (B2)

Two additional children, Othieno (A2) and Aoko (B2), were added to the sample three months after the beginning of the research, so as to provide more information for the age range of one to two years.

3.4.1 Othieno (A2). Othieno was fourteen months old at the time of our first visit, and for this and the second visit a month later, we were not able to record any utterances. He was still in the babbling stage, and there

was no information as to whether he was also producing words. Later in the fifteenth month, we enlisted the aid of his mother, but the only responses we were able to obtain in a 30-minute period were e: "yes" in response to his mother's question ičamo tamtam? "you (have)-eat(en) candy?" and 'a'a "no" in response to her demand miya tamtam "give-me candy".

In the seventeenth month, his mother reported that he still could not talk, but that he continued to babble. During this visit, his mother reported that he had begun to say mama and baba at the age of six months, but we were never able to get a record of him actually saying them. Early in the eighteenth month, we still were not able to record any speech, but he had begun to reply [hUh] to questions that were directed to him, as if he were asking for a repetition of the question. In adult Luo, the expression is used to indicate that the previous remark was not heard or understood, but in this particular session, Othieno used it after each question addressed to him. It is difficult to ascertain just what role the utterance played in his speech. It may have been the case that he was not capable of decoding the questions and was actually asking for them to be repeated, or perhaps more likely, he recognized that the utterance was a correct response to some questions and had generalized it as a response to all of them, "feeling" that it was a sufficient answer.

Later in the eighteenth month a few words began to appear. As we entered the homestead, Othieno's nursemaid told him to greet us misawa, and Othieno loudly called [ca]. A few minutes later, after his mother had unsuccessfully tried to get him to talk, he walked outside and began to call for his Nursemaid Obare, by calling [baya] loudly several times. His mother reported that he was beginning to talk now, even though he still continued to babble. She reported that he was able to say miya when he wanted something, and in addition, he was able to say mama, baba, čam "food" and baya "Obare".

More terms and the first two-word utterances appeared in the nineteenth month. He answered the question mama grɛ? "mother is-where" with (1)³ en ka "she is here". He would not say anything else in our presence, but his brother Obare told us that he would say pi, pi "water" whenever he wanted a drink, said Uka for /nyUka/⁴ "porridge", and said (2) čam miya "food give-me" rather than the correct adult versions of miya čam "give-me food" or miya ačam "give-me I-eat".⁵ In the twentieth month, he made the utterance mama, ne "mama, look/see" as he was holding us a piece of candy for her to see. He also began to play with the term mama, which he kept repeating over and over in the form of a song. Observation ended in the twentieth month.

As incomplete as the record is for Othieno, it is possible to make a few generalizations concerning his speech development. First, babbling had begun by the sixth

month and it continued at least through the eighteenth month. Secondly, he was capable of responding in a yes-no fashion to questions at the age of fifteen months. It was reported in the seventeenth month that he was not yet able to talk, and in the eighteenth month, a few words began to appear. The ones recorded were mama, baba, miya, ča (for misawa, a greeting), čam "food", and baya "Obare". In the nineteenth and twentieth months, new items to appear were en "he/she/it is", ka "here", pi "water", Uka "porridge", and ne "see/look". Also in the nineteenth month, the first two-word utterances appeared, and reports from his mother and nursemaid confirmed the fact that he was capable of using two-word sentences at this age.

3.4.2 Aoko (B2).

3.4.2.1 Speech Samples. Aoko (B2) was 16 months old when observations began and attempts were made to collect speech samples. No speech was evident on our first visit, although it was apparent that she was able to understand some of the remarks addressed to her, such as bi ka "come here" and bed piny mōndɔ amiɣi nyUka "sit down so that I-give-you porridge", and mak gi lwɛtɛni arIyo "hold with hands both". She responded appropriately to such demands as the above. On another visit, her brother succeeded in getting her to imitate the word čam "food/eat".⁶ He gave her a piece of candy, repeating over and over čam, čam ..., and she finally replied, in a whisper, [tam].

A similar episode occurred during the eighteenth month. Aoko's mother, brother, and sister were all encouraging her to talk, but she declined, which prompted her mother to remark Elisa, ok nyal wuoya kata mond? "Elisa, not able (you) talk-to-me even for-a-little-while?" There was no response, and her mother reported to us Elisa ogomo "Elisa refused" and let the matter end there. Aoko's brother persisted in his efforts, and by whispering to her cam repeatedly, she began to repeat after him, whispering cam in return. Her sister then said to her ne mara "see mine" (talking about a piece of candy), and Aoko replied maya, maya. Her sister then addressed her in falsetto, agoyi, agoyi "I (am going to)-beat-you", and Aoko replied [go]. Later, in an attempt to get her to name the people present, her sister said "Auma, Tabu, Ageyo". Aoko replied "Tab", and this performance was repeated three times.

All of the above utterances by Aoko were obviously imitations, but her mother assured us that she was beginning to say a few words, such as the names of her brother and sister and other words such as miya and weya. As with Ogutu (A1) at an earlier age, the term miya "give-me" most likely does not represent two morphemes for Aoko, but rather functions psychologically as a unit, i.e. it is monomorphemic. Weya is of a similar construction. The verb root weyo may be glossed as "stop, let alone, leave alone", and inflected with the pronominal -a "me, mine", renders "leave-me-alone" or "leave-mine-alone". For Aoko the term weya is probably a generalized form meaning "stop"

or "don't", but this cannot be known for sure, due to lack of contextual information.

In the last visit in the eighteenth month, Aoko provided two more features of development, one a minor example of naming behavior, by pointing to a piece of candy and naming it tamtam. The second feature was an 'a'a response to her mother's command ʔi ine welo moko "go you-see visitors some". During the visit, her mother reported that she no longer babbled, and that she stopped a month earlier, i.e. in her seventeenth month.

In the nineteenth month, there was another instance of a "no" response to a command. Her father told her ʔi imos wendo "go you-greet visitor", to which she replied 'a'a. In the same visit, she used her first two-word utterance in our presence, saying (3) ne tamtam "see candy" to her brother, holding the candy for him to see.

Due to the extreme difficulty of collecting systematic data for Aoko's speech, we asked her father to supply us with some information. The following material which is for her twentieth month, and the qualification must be made that the data is fragmentary, that the vocabulary, for example, is only a partial list of the terms Aoko had at her command. His reports do supply some valuable information, though, which could not be gained in any other fashion. An immediate objection which may be made as to the reliability of the father's reports is that he would not have enough contact with the children or be concerned with their deve-

lopment to the extent that he would notice features such as vocabulary development. There is some merit in this objection, but it should be noted that due to spatial arrangements of the living quarters which facilitate interaction, and to such practices as the children sleeping with their parents until the age of two (or more), there is ample opportunity for contact between all members of the family.⁷ There is also a pattern in some Luo families of close contact between a father and his young daughter, although the relationship alters drastically as the girl grows older. Several of the men in the sample unit responded to my question on daily routines as to "whom do you talk with most when you are at home?" by naming their young daughter. Aoko's father answered the question in this fashion.

Most of the information her father gave was related to her vocabulary development, telling us which words she was and was not able to use in her speech. The items listed in Table 2 are terms which he reported Aoko as being able to use without difficulty.

Table 2:
Reported Vocabulary for Aoko (B2) at 20 Months

<u>Terms</u>	<u>Glosses</u>
odUma	maize
čiemo	food
kuon	bread
nyUka	porridge
mač	fire
yIen	wood
san	plate

Table 2 (Continued)

<u>Terms</u>	<u>Glosses</u>
nanga	cloth(es)
kom	chair
mesa	table
ðiaŋ'	cow
gwɛno	chicken
dɪɛl	goat
aloθ	vegetables
ðoɔt	door(way)
tamtam	candy
kwer	hoe
koɸia	hat, cap
kimbo	lard (tinned)
agwata	drinking cup (gourd)
tɔŋ'	spear
tɔŋ'	egg
rɪŋgo	to run
beto	to cut, harvest
ne	see
miya	give-me
weya	stop
pi	water

Aoko's father also reported that she was able to string a few short words together to form sentences, such as (4) miya pi "give-me water" or (5) miya tamtam "give-me candy". She was not yet able, however, to use the

verb dwaro "to want, need", which always occurs in an inflected form. Likewise, she was not yet able to use the appropriate term for "expressing hunger, which is keč kaya "hunger bites-me", but uses instead miya plus objects. An interesting feature of naming behavior during this period was Aoko's term for ants. An ant had stung her, and her father, in explaining what had happened, told her mor kayi "ant bit-you", which she took to be the name for ants and used in that respect.

Some more speech samples were recorded in the twentieth month. Like Othieno (A2), Aoko, in the midst of playing, began to make a song of mama and baba, chanting them over and over again. In the same observation period, she began to play with her father's cap, which was hooked over the back of a chair. As she was trying to get the cap, she repeated (6) game "hand-it-over" three times. The appearance of the third person singular marker -e may indicate that a rule for marking pronominal inflection has been acquired, i.e. with the contrast provided by the first person singular -a in miya or weya, but again, the term game may have been learned as a unit. As we shall see, the use of inflections is clearly marked in the 21st month, and it is probably present in the twentieth, but the evidence is not sufficient to establish that claim.

Another utterance in the twentieth month was (7) ndawa piny "tobacco (cigarette) down/floor", which Aoko said as she picked up a cigarette butt which had been extinguished

on the floor. She pretended to smoke the cigarette, showing her father and saying (8) baba ndawa "father cigarette". She was then given a piece of candy, to which she responded (9) miya tamtam "give-me candy". Her father, teasing her, took the candy away from her, prompting her to shout (10) miya tamtam, miya. He returned the candy to her, and she began to suck on it, remarking ɔk "mouth". Later, she was asked to identify the researcher, and she replied (11) ma wendo "this visitor".

During the 21st month, we were still experiencing considerable difficulty in persuading Aoko to talk. Her father agreed to try to get her to talk in our absence, but with the tape recorder in operation. After one unsuccessful attempt, we were able, several days later, to collect a small sample of speech between Aoko and her father. Portions of the conversation are given in Table 3.⁸

Table 3
Recorded Conversation between Aoko and her Father
(21 months)

<u>Father</u>	<u>Aoko</u>
<u>Omiyi n̄ano ma omiyi?</u>	---
"gave-you who which gave-you?"	
<u>wendo!</u>	---
"Visitor!"	
<u>Elisabeth, msungu oŋi kanye?</u>	---
"Elisabeth, European went where?"	

Table 3 (Continued)

<u>Father</u>	<u>Aoko</u>
<u>msungu ođi ooko?</u>	<u>ee</u>
"European went outside?"	"yes"
<u>wač ane kode, Elisabeth</u>	<u>'a'a</u>
"talk please with-him, Elisabeth"	"no"
<u>Joka ođi giwenwa gima ber, ineno?</u>	<u>ber</u>
"those-people went, they-left-for-us thing-which good, you-see?"	"good"
<u>gino ber</u>	<u>gino</u>
"thing-that good"	"thing-that"
<u>ber kabisa</u>	(12) <u>gino ber</u>
"good very-much"	"thing-that good"
<u>Elisa, Joab oφuwo</u>	<u>ee</u>
"Elisa, Joab is-foolish"	"yes"
<u>msungu ođi oko. msungu osea</u>	<u>ee</u>
"European went outside, European has-left."	"yes"
<u>ere msungu, ođi oko?</u>	---
"Where-is European, he-went outside?"	
<u>wač ni msungu osea</u>	<u>čungu osea</u>
"say 'European has-left'"	"European has-left"

Table 3 (Continued)

<u>Father</u>	<u>Aoko</u>
<u>msungu osea. oŕi kure?</u>	<u>čungu osea. (13) oŕi</u> <u>Ulanda.</u>
"European has-left. He-went where?"	"European has-left. He- went to Ulanda."
<u>ose kuro? oŕi Ulanda?</u>	<u>ee. čungu osea. (14)</u> <u>oŕi Ulanda.</u>
"he-has (gone) there? he-went to Ulanda?"	"yes. European has-left. he-went to Ulanda."
<u>ma e b̄er, mare.</u>	(15) <u>ma e mare.</u>
"this one good, his" (talking about the tape recorder)	"This one his."
<u>mare maber.</u>	<u>ee. (16) okelo.</u>
"his good"	"yes. he-brought (it)."
<u>okelo nwa.</u>	(17) <u>okelo ma e.</u>
"he-brought (it) for-us"	"he-brought this one"
<u>we:, kik ikeθ. kikeθo to</u> <u>rači, di msungu gowa.</u>	<u>ee.</u>
"don't! don't you-break it. If you break-it, bad-you, then European (will) beat-us."	"yes"
<u>ee, koro inenogi?</u>	<u>ee, (18) anenogi.</u>
"yes, then you-see-them?"	"yes, I-see-them."

Table 3 (Continued)

<u>Father</u>	<u>Aoko</u>
<u>ineno msungu?</u> "you-see European?"	(19) <u>aneno čungu.</u> "I-see European."
<u>ee, ma e to ano? ma e ano?</u> "yes, this one but what? this one what?"	(20) <u>ma e.</u> (21) <u>en čungu.</u> "this one. it European."
<u>ee, ne ma to ano?</u> "yes, see this but what?"	(22) <u>ma e čungu.</u> "this one European"
<u>mača, ma to ano?</u> "that, that but what?"	(23) <u>ma e?</u> "this one?"
<u>en ano?</u> "it what?"	(24) <u>ma e,</u> (25) <u>en gini.</u> "this one, it thing- this."
<u>en ano?</u> "it what?"	(26) <u>ma e,</u> (27) <u>ma e čungu.</u> "this one, this one European."
<u>msungu ođi kanye?</u> "European went where?"	(28) <u>awaje:!</u> "I-burned-him!"

3.4.2.2 Analysis of Speech Samples. Prior to analyzing the conversation between Aoko and her father, a distinction

must be made between her utterances which are imitations, immediate or delayed, of previous utterances of her father, and those that are produced spontaneously. At issue here is one of the basic questions toward which the research is directed, namely the identification of the types of regular productions of grammatical features and the ages at which they occur in Luo children. A basic assumption is that the utterances of the children at some point are not merely rote learned, but are generated by the grammar of the child. At times, however, the distinction is blurred, and it is difficult to categorize an utterance, particularly in the early stages of grammatical development where it is obvious that imitation is a prominent feature of the child's speech. The criteria employed for the above conversation (and for later ones) are (1) if the child's utterance is a word-for-word imitation of an utterance produced by another party, whether it was immediately contiguous or not, the utterance was counted as an imitation; (2) all other utterances were counted as being generated by the child's syntax, including those that include terms from previous utterances of the other party and those that employ no new terms, but represent a concatenation of the terms in the previous utterance. According to these criteria, the utterances čungu osea "European has-left" are all imitations, but (12) gino bër "thing-that good" and (13) ođi Ulanda "he-went to Ulanda" are produced by the child's grammar.

For morphology, the problem is more complex, as even the spontaneous appearance of an inflected form does not necessarily mean that an inflectional rule was applied. The child may have learned the term as a unit. The criterion employed in the present analysis is that the child is credited with the ability to apply inflection rules when there is a basis for contrast for inflection of each particular kind. Ideally a contrast set for a particular term would be preferred. For utterance (13) oŋi Ulanda, for example, the child would be credited with the inflectional rule if he produced other pronouns to contrast paradigmatically with the third person singular o- in the environment __ ŋi. The criterion accepted here, however, specifies that the child is capable of applying the rule if a contrast set of pronominals appears in the environment __ Verb.

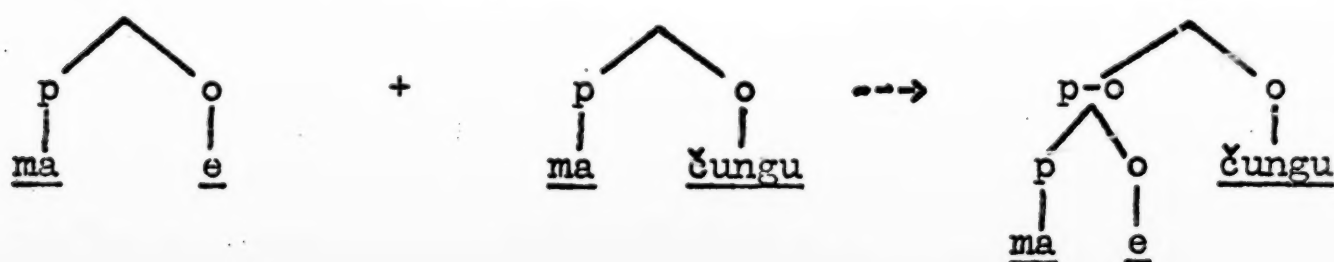
Utterances (13) oŋi Ulanda "he-went to Ulanda" and (16) okelo "he-brought (it)" contrasted with (18) anenogi "I-see-them" and (28) awane: "I-burned-him" indicate that Aoko is able to inflect verb stems to mark pronominal subject. The pronouns an "I" and en "he/she/it" become a- and o- in the environment __ Verb. There is also some supportive evidence for Aoko's ability to use verbal inflection of this type. In utterance (18) anenogi "I-see-them", she was responding to her father's question inenogi? "you-see-them?", indicating that she was able to transpose correctly from second person singular to first person singular in the subject.

Utterance (18) anenogi "I-see-them" contrasted with (28) awane: "I-burned-him" indicates that Aoko is able also to inflect the verb to show pronominal object, i.e. nen + gi → nenogi and wano + e → wane. Utterance (18), though, as indicated, followed her father's question inenogi "you-see-them?", and it is possible that the third person plural -gi was simply an imitation, in which case, no contrast is available in the pronominal object set. Utterance (28) was spontaneous, however, indicating at least the possibility that inflection for pronominal object is within Aoko's linguistic capacity.

In any event, it is clear that Aoko was able to use inflection to mark pronominal subject, at the age of 21 months. There was continued use of two-word utterances at this age, as clearly shown in Table 3. Several new combinations appeared, such as numbers (13), (19), (23), (24), and (25). The sample is far too small to identify a pivot grammar, but attempting to discover a pivot grammar at this stage is not necessary. It may have been the case that Aoko was using a pivot grammar in earlier speech, as in the preceding month. There are hints that some words may have acted as pivots, such as en ((21) and (25)) and ma ((11), (20), and (23)), but the evidence is not conclusive. At any rate, it does seem clear that in the 21st month, Aoko's grammar is more complex than a pivot type. The use of verb inflections show that her grammar is already hierarchical and cannot be accounted for by pivot construc-

tions. In addition, there are several three-word utterances in her speech, indicating that she is past the two-word stage.

It is interesting to note that the three-word utterances in Aoko's speech represent hierarchical constructions similar to those appearing in the speech of American children. For example, the utterances "man car" and "other car" are combined to form "other man car" or "man other car" (cf. Slobin 1967:108-9). Aoko's utterances that appear similar in construction are: (15) ma e mare "this one his"; and (22) ma e čungu "this one European". If the introduction of the particle e represents the addition of another morpheme to constructions with the morpheme ma, as (11) ma wendo "this visitor", then (15) and (22) would represent the following kind of construction:



The question of synonymy must be raised, however, for the expressions ma and ma e. Studies with English-speaking children have shown that the terms "that", "that's", and "that'sa" are all monomorphemic and synonymous (Miller and Ervin 1964:17-20). Conceivably ma "this" and ma e "this one" could be similar to the English examples. If this were the case, (15) and (22) would not be hierarchical.

As a first step in clarifying the issue, we can turn to an explication of the role of the particle e in the Luo language. Edgar Gregersen, in his analysis of Luo grammar, makes the following points.

"Use of the deictic E-phrase (as opposed, say, to an expression of place in or on) is limited to nonverbal constructions altogether. A deictic E is required: (a) before a ma clause; (b) after the noun ma "this-one", or a nominal phrase with ma as the head; (c) before an infinitive verb; (d) when the subject is a proper name and the predicate noun is modified by a conjunctive pronoun or demonstrative. When the subject is not a proper name, use of E before a noun modified by a conjunctive pronoun or demonstrative is facultative. Elsewhere, E is emphatic, so that one might translate gn e ruo@ as "he is the chief", as opposed to gn ruo@ "he is a chief" (1961:62).

With Gregersen's analysis in mind, an inspection of the data indicates that Aoko has acquired the rule that "the particle e is required after the noun ma". In an earlier utterance, (11) ma wendo "this visitor", the rule was absent, but in all of her utterances in the 21st month, the particle was present. From this evidence, it would appear that e as a direct (deictic) particle served no semantic purpose, and that ma and ma e were, in fact, synonymous. Other evidence, though, show that the opposite is more likely the case.

First, Gregersen's rule(b), that e is required after ma and the statement that "...Elsewhere e is an emphatic" are not mutually exclusive. The particle e can function as an emphatic in the environment ma_, meaning "this one". Indeed, in the speech of some adult informants, e was used in precisely this manner, i.e. only as an emphatic and not as a direct particle.¹⁰ In Aoko's speech, e seemed to be functioning in this manner.

In the entire conversational sequence in which the phrase ma e occurred, Aoko and her father were talking about the tape recorder. The introductory remark was her father's ma e ber, mare "this one good, his". All of his and Aoko's subsequent remarks on the topic were designed to identify the tape recorder as one of several objects in the environment and ascribe its ownership to the researcher. Utterance (15) ma e mare, then is best glossed as "this one his", and likewise, utterances (20), (23), (24), and (26), ma e "this one" functioned primarily to identify the tape recorder as the object being discussed. In utterances (22) and (27), ma e žungu the particle e is not the direct particle e but rather it is the emphatic "one". In this sense, the utterances (15) and (22) represent hierarchical constructions comparable to those in English.

Predicative sentences in Aoko's speech at 21 months also were order constrained. Number (17), okelo ma e, for example, shows SVO ordering, as does (28) awane

"I-burned-him". Although the evidence on this issue is meager, it appears that the standard word order is acquired early. Later information will be considered on this point.

During the final visit with Aoko, in the 22nd month, we were able to add only slightly to her record. At one point in the visit, Aoko pointed to a chicken nearby and remarked gwino "chicken". Here sister asked gre gweno, Elisa? "where-is chicken, Elisa?", to which she responded (29) ne mača "see that". Later in the visit, she and her brother were playing with a toy car, and in the midst of playing, Aoko remarked (30) gaye yingo /gare ringo/ "car runs".

Viewing the development of Aoko's speech, the prominent features, in summary, were: (1) babbling behavior continued until the seventeenth month; (2) one-word utterances were characteristic of the eighteenth month; (3) the first recorded two-word utterances were in her nineteenth month of age; (4) two-word utterances resembling pivot constructions were present in the twentieth and twenty-first months, with the terms miya "give-me", en "he,she,it", ne "see", and ma "this" possibly functioning as pivots; (5) inflections began to be used in the twentieth month, were clearly present in the twenty-first month, and the inflections marked pronominal subject and object; (6) non-predicative three-word utterances, hierarchically constructed, appeared in the twenty-first month, with the construction ma e used in combination with open-class words; and (7) predicate

sentences appeared in the twenty-first month, with constrained word order.

3.5 SPEECH SAMPLES OF RISPER (D)

3.5.1 Speech Samples. Child D in the sample, Risper Adhiambo, like the other children, was shy and speechless in our presence, especially during the early period of the research. Consequently, most of the information collected during this period was from the child's mother or older sister. As in Aoko's case, it was possible to reconstruct some of her early vocabulary by asking her mother to tell us all the words that Risper knew and was able to use in her speech. Those reported by her mother are given in Table 4.

Table 4
Reported vocabulary for Risper (D) at 21 months

<u>Terms</u>	<u>Glosses</u>
mama	mama
čam	food
pi	water
kuon	bread
alot	vegetables
nyUka	porridge
ugi	porridge
sam	plate
pala	knife
beti	slasher

Table 4 (Continued)

<u>Terms</u>	<u>Glosses</u>
kom	chair
een	stool
ot	house
dala	home
mač	fire
gweno	chicken
šian	cow
gwok	dog
dIel	goat
rombo	sheep
paka	cat
kidi	stone
bel	millet
odUma	maize
rabwon	potato
rabolo	banana
tamtam	candy
čak	milk
wiyo	head
waŋ'	eye
tielo	leg, foot
bat	arm
it	ear
um	nose
lweto	hand
lak	tooth

Table 4 (Continued)

<u>Terms</u>	<u>Glosses</u>
toŋ gweno	egg
lum	grass
dwaro	to want
nindo	to sleep
tuo	to be ill
čɪɛmo	to eat (intran.)
doyo	to dry
miyo	to give
moðo	to drink

During the visit when the vocabulary list was compiled, we were successful in obtaining a few two-word utterances. Risper asked her older sister for a drink of water, saying (31) miya pi "give-me water". As she was pausing for breath while drinking, she remarked (32) amoðo pi "I-drink water". Later, as her mother was preparing breakfast, she said (33) adwayo čam /adwaro/ "I-want food", and a few minutes later, she said (34) miya ugi "give-me porridge".

Risper was visited a number of times over the next six months, but we were singularly unsuccessful in collecting more speech from her. A number of expedients were tried, such as having only one person, Oyugi, visit the home and remain in the background while attempting to record her speech. On such attempts, he was not able to record even a single utterance. On one visit, in the 23rd

month, he managed to get a response from the question mama ɛrɛ? "mama is-where?". Risper replied (35) mama ɔi lwoko "mother goes to-wash". Not until her 27th month were we able to collect a speech sample of any size at all, and most of the utterances were answers to questions, particularly ones in which she was asked to name objects in the environment. Some of the utterances are important for morphological and syntactical considerations, and these utterances are given below in Table 5. All of the utterances were collected in the presence of Risper's mother, sister, and the investigators, and all of the questions were asked by Okumu.

Table 5
Recorded utterances of Risper (D) at 27 months

<u>Okumu</u>	<u>Risper</u>
<u>mama ɛrɛ?</u> "mama is-where?"	(36) <u>onge</u> "absent"
<u>mača ano?</u> "that-there what?"	(37) <u>mača en gwɛno</u> "that-there it chicken"
<u>ma e ano?</u> "this one what?"	(38) <u>mača sandwa</u> "that-there box-ours"
<u>to ma e?</u> "and this one?" (a dresser in the room)	(39) <u>akia</u> "I don't know"

Table 5 (Continued)

<u>Okumu</u>	<u>Risper</u>
<u>to ma e ano, man e lwetani?</u> "and this one what, which is on hand-my-here?"	(40) <u>en sa:</u> "it watch"
<u>ma e anoni?</u> "this one what here?"	(41) <u>lweta</u> "hand-my"
<u>to ma e ano, maruakoni?</u> "and this one what, which-you- wear-here?"	(43) <u>en sa:</u> "it watch"
<u>ma e ano maruakoni?</u> "this one what which-you-wear-here?"	(44) <u>toča /wuoča/</u> "shoe-my"
<u>to ma e an ano, Risper?</u> "and this one it what, Risper (talking about the clipboard)?"	(45) <u>akia</u> "I-don't-know"
<u>to ma e ano?</u> "and this one what?"	(46) <u>tienda</u> leg-my"
<u>ere nuti?</u> where is back-your?"	(47) <u>ma e</u> "this one"
" <u>ḡogi?</u> " " mouth-your?"	" "
" <u>laki?</u> " " tooth-your?"	" "
" <u>iḡi?</u> " " ear-your?"	" "
" <u>umi?</u> " " nose-your?"	" "
" <u>wani?</u> " " eye-your?"	" "

Table 5 (Continued)

<u>Okumu</u>	<u>Risper</u>
<u>mani</u> , <u>ma</u> <u>ano</u> ? <u>ikiaye</u> ? . .	(48) <u>aneyo</u>
"this-one, this what?	"I-know"
do-you-not-know-it?	

Another utterance, collected in the same visit, was (49) mama, mičungu biro "Mama, European is-coming", which Risper shouted to her mother as she ran to tell her we were approaching the homestead. The final sample was for the 28th month and was in response to the question mama ere? "mother is-where?". Risper replied with (50) oši kulo "she-went to river".

3.5.2 Analysis. For the early period of Risper's development, all that can be said is that in the 21st month, two-word utterances were present, that the word order (S)V0 was present, and that she was past the pivot stage, if one had existed. The presence of adwayo "I-want" probably indicates that inflection was present as an aspect of her grammar at this age, as the input form would have been idwaro "you-want..." (i.e. the term adwayo would not have been imitated directly). At the 27th month, inflection was used in several instances. In (39) and (45), inflection was used to mark pronominal subject, and in (38), (41), (42), (44), and (46) inflection was used to mark possession. For the latter, several morphophonemic rules were also used. These are shown, with examples in Table 6.

Table 6
Morphophonemic rules in Risper's speech at 27 months

<u>Utterance</u>	<u>Rule</u>	<u>Example</u>
(41)	-d- --> -t-	(lwedo + -a --> lweta)
(42)	-c --> -y-	(wič + -a --> wiya)
(44)	-r --> -č-	(wuor + -a --> wuoča)
(46)	-l- --> -nd-	(tielo + -a --> tienda)

In the 27th month, an interesting new syntactical construction is provided by utterance (37). Number (37), mača en gwano "that-there it chicken" appears at first glance to be a topic-comment construction, such as "the salt, it's on the table" or "the boy, he...". Luo contains constructions of that type, but as in English, the juncture between the topic and comment is prolonged. Risper did not provide a long juncture between mača and en, and the utterance thus provides an example of a special construction in Luo, that of cross-reference agreement in the subject. In this construction, according to Gregersen, "...a noun or disjunctive (non-inflected) pronoun stands in construction with another pronoun subject. The disjunctive pronoun can stand in such a construction only with a following conjunctive (inflected) pronoun subject; the noun (or noun phrase), with either a conjunctive or disjunctive pronoun" (1961:69). In (37) the noun mača stands in construction with the disjunctive pronoun en.

Risper, at this age, handled "wh" questions with ease, by providing appropriate "th" answers, as in (37) and

(38); naming responses, as in (40), (41), (42), (43), (44), (46), and (47); and the proper negative responses, as in (39) and (45). Utterances (39) and (45), akia, are interesting in that a negative is expressed in verb form. The best gloss for the verb root kia is "to not-know", meaning not-to-know a fact, not-to-recognize something, or not know how to do something. Another verb, neyo, when used with the negative particle ok, also has the same meaning, but it also can mean "to-not-understand". Utterance (48), aneyo, provides an instance of an affirmative use of the verb, meaning in that instance "to recognize". Risper, then, used the negative verb to indicate negation rather than using the more complex 'positive' verb plus negative particle, even though the positive verb was in her vocabulary.

Response (36), onge, is also interesting in that it also expresses a negative concept. Onge is a verb meaning essentially "to be absent" and is used to indicate lack of possession, i.e. "to not have"; lack of presence "not to be here"; and non-existence, "there isn't any". Risper's use of the term meant, in context, "she isn't here", but she did not use the pronominal marker o-. In addition, the reply was not appropriate, since her mother was present at the time. Her mistake may represent an example of overregularization of use, in that onge is a proper reply to questions of "where", as for example, mama εrε? "mama is-where?" -- oonge "she-not-here". In other words, Risper

recognized the utterances as a "where" question and provided an answer that would be appropriate for some contexts, but not for that particular one.

3.6 SPEECH SAMPLES OF OCHIENG (C)

Child C in the sample, Ochieng, proved to be the most reticent of all in his speech behavior. Although he was visited a total of fifteen times over a period of seven months, he, unlike, the other children, never overcame his shyness, and consequently, we were able to collect almost no direct information about his speech development. Ochieng was 25 months of age when observations began. During this month, we attempted to collect information from his mother on the range of his vocabulary. Those reported for him were the same as for Risper (D) as shown in Table 4, but with the following additions: otinga, "tractor", mitoka "motor car", maua "flower", japuonj "teacher (his term for his father)", sabun "soap", kibrit "matches", and cinga "rain-water".

During the 25th month, we were able to collect the following utterances: (51) miya pi "give-me water"; (52) adway čam "I-want food"; and (53) ket kaya /keč/ "hunger bites-me". The only other utterance we were able to collect was in the 32nd month, when he said adway čam to his mother as she was preparing breakfast.

Ochieng's father and mother both reported that he was perfectly capable of talking, and in the absence of

visitors, he would talk normally. He simply would not talk when visitors were present in the homestead. It might be mentioned that he was expected to decode rather complex messages during the latter period of the study. For example, in the 28th month, his mother, in a futile attempt to persuade him to talk, used such remarks as:

Kiwačo eka obiro miyi ka ok iwačo to ok obimiyi.

(K(a)iwačo eka obiro miyi ka ok iwačo to ok obi(ro)miyi)

"If-you-talk then he-is-going to-give-you (candy),
but if not you-talk then not he-is-going-to-give-(it)
to-you".

At this age, he was expected to handle negatives, future tense, subjunctive mood, and truncations.

3.7 SUMMARY

If we now place the speech development of the four children, A2, B2, C, and D, in chronological order, answers may be provided for some of the questions posed at the beginning of the chapter.

3.7.1 Babbling. To begin with, babbling behavior continued to be exhibited during the early one-word utterance stage. Ogutu (A1) at 12 months and Wanga (B1) at 14 months each had three-item vocabularies, and both were still engaging in babbling behavior. Othieno (A2) was still babbling at the age of 18 months, but there was no evidence of continuation into the nineteenth month. Aoko (B2) stopped babbling at the age of 17 months. Babbling, then, seems to terminate

during the 17-18 month age range. The children from whom this information was obtained, though, A2 and B2, were relatively slow in the onset of speech, and the babbling period for them may have been slightly extended. The earliest recorded utterances for A2 and B2 were in the eighteenth month, whereas for A1, it was in the twelfth month and for B1 in the fourteenth month. One consistent feature is that the earliest terms were the same for all the children, with the terms mama, baba, and miya all appearing in the same month for each child.

3.7.2 Lexical Items. It was not possible to measure the one-word utterance stage for A2, and for B2 the stage was relatively brief, lasting approximately only two months, as she began to use two-word utterances regularly during the twentieth month. Information on the progression of the acquisition of lexical items is at best sparse, but from the original three-item vocabularies at 12-14 months, a child in his twentieth month has mastered a fairly large number of items. As one would expect, a limited environment is expressed in the earliest terms. The first forms are names of "caretakers" -- mama, baba; personal names (Baya); the command "give-me" or "want" -- miya; and the generalized term for food -- čam. Expansion of the vocabulary consists primarily of an extension of naming behavior to objects in the immediate environment of the child, particularly for food and objects related to food, such as cooking utensils.

The early, inanimate nouns have the characteristic of being mass rather than count nouns. This results from the fact that the terms for food, which are learned early, are mass nouns in Luo. The early animate nouns are count nouns, being the names of people with whom the child comes into contact. The inanimate nouns fall into several categories, most of which are related to food and to objects in the home. The categories and entries are given below in Table 7. Likewise, the animate nouns break down into major classes, human, animal, and names for body parts. These are also shown in Table 7. The numbers in the columns represent the earliest age for which a record of the use of the terms was available.¹¹

Table 7
Lexical Items for Children A2, B2, C, D

NOUNS	A2	B2	C	D
<u>Animate</u>				
1) Human				
mama "mama"	17			
baba "papa"	17			
"personal names"	17	18		27
wendo "visitor"		20		
čungu "European"		21		27
nyaθi "child"			25	27
ŋato "man"				27
ðano "person"				27
ji "people"				27

Table 7 (Continued)

NOUNS	A2	B2	C	D
ɟaduonɟ "elder"				27
2) Domestic animals				
ɕianɟ "cow"		20	25	21
gwɛno "chicken"		20	25	21
dIɛI "goat"		20		21
gwok "dog"			25	21
paka "cat"			25	21
rombo "sheep"				27
3) Wild animals				
winyo "bird"			25	27
lIɛɕ "elephant"				27
sImba "lion"				27
4) Body parts				
ɕɔk "mouth"		20		27
wiyo "head"			25	21
waɟ "eye"				21
tielo "leg, foot"			25	21
bat "arm"			25	21
it "ear"			25	21
um "nose"				21
lweto "hand"			25	21
lak "tooth"			25	21
iɕ "stomach"			25	
<u>Inanimate</u>				
1) Food				
ɕam "food"	17	18	25	21

Table 7 (Continued)

NOUNS	A2	B2	C	D
pi "water"	18	20	25	21
nyUka "porridge"	18	20	25	21
tamtam "candy"		18		21
aloθ "vegetables"		20		21
toŋ "eggs"		20		
oduma "maize"		20		21
kuon "bread"		20	25	21
čak "milk"				21
rabwon "potato"				21
rabolo "banana"				21
reč "fish"				27
2) Utensils				
san "plate"		20	25	21
kom "chair"		20	25	21
mesa "table"		20	25	
kwer "hoe"		20		
agwata "gourd cup"		20		
toŋ "spear"		20		
beti "slasher"		20		21
pala "knife"			25	21
θen "stool"			25	21
sanduk "box"			25	27
taya "lamp"				27
3) Cooking				
mač "fire"		20	25	21
yIen "firewood"		20	25	

Table 7 (Continued)

NOUNS	A2	B2	C	D
kImbo "lard (tinned)"		20		
kibrit "matches"			25	
4) Homestead				
ot "house"			25	21
šost "doorway"		20		
dala "home"			25	21
5) Clothes				
nanga "cloth(es)"		20		
košia "cap, hat"		20		27
lawa "clothes"			25	
wuoče "shoes"				27
6) Natural features				
lum "grass"			25	21
kidi "stone"				21
lowo "dirt"			25	
maua "flower"			25	
kulo "river"				28
7) Vehicles				
gare "car"		22		
mitoka "car"			25	
otinga "tractor"			25	
ndinga "bicycle"			25	
8) Other				
keč "hunger"			25	
činga "rain water"			25	
bel "millet"				21

Table 7 (Continued)

NOUNS	A2	B2	C	D
sabun "soap"			25	
ndawa "tobacco"		20		
gi "thing"		21		
saa "clock"				27
PRONOUNS				
<u>Personal</u>				
en, o-, -e "he, she, it; his"	18	21		27
an, a-, -a "I, me, my"		21	25	27
wa- "we, us, our"				27
-gi "them"		21		
<u>Demonstrative</u>				
ma "this"		20		27
-ni "this"		21		
-no "that"		21		
-ča "that"		21		27
VERBS				
<u>Transitive</u>				
miyo "to give"	17	18	25	21
weyo "to leave alone"		18		
neno "to see"		19		
gam? "to hand over"		20		
beto "to cut, harvest"		21		
kelo "to bring"		21		
čamo "to eat"		21		21

Table 7 (Continued)

VERBS	A2	B2	C	D
doyo "to dry"				21
moŋo "to drink"				21
waŋo "to burn"		21		
puoŋo "to fall down"				21
lwɔkɔ "to wash"				23
dwaro "to want"			25	
keto "to put"			25	
<u>Intransitive</u>				
rIngo "to run"		20		
ŋi(yo) "to go"		21		23
biro "to come"				27
ŋiemo "to eat"		20	25	21
nindo "to sleep"				21
tuo "to be sick"				21
oŋge "to be absent"				21
kia "to not-know"				27
ŋeyo "to know"				27
INTERJECTIONS				
'a'a "no"		18		
ee "yes"	15	20		
misawa "hello"	17			27
erokamano "thanks"				28

Two types of pronouns were present in speech at this age, personal and demonstrative. It is interesting to note that no second person pronouns were present, which may

result from the fact that the second person is addressed by children at this age by commands or by their name, as mama or baba. Only two adverbs were present, ka and piny, and both of these are locatives, "here" and "down". One adjective was used, bər, which glosses as "good, pretty". Two interjections were also used early: !a'a "no" and ee "yes".

As shown in Table 7, both transitive and intransitive verbs were present in the lexicon. The verbs were mostly names of actions or states occurring in the daily routines of the children, as e.g. čamo "to eat", močo "to drink", nindo "to sleep", etc.

There is relatively little information available on vocabulary development for the age range of 22-28 months. Information from Ochieng (C) at 25 months yielded a few lexical items not present at 20-21 months, such as otinga "tractor", but all of the new items fall under the classes already established in the earlier period. It is noteworthy that at 25 months there is still no appearance of abstract nouns except the predicate adjective bər. For example, such nouns (or adjectives) as nic "cold, cool" or liet "warm, hot" had not appeared in the children's speech, and more "abstract" verbs such as hero "to like, love" or mər "to be pleased, happy" also had not appeared. The lack of the use of plurals should be noted also. Although verbal inflection is present and inflection of nouns for subject and object, there were no examples of noun inflection for plurals.

Speech samples from Risper at 27 months indicate that vocabulary development at this stage consists mainly of addition of terms to the pre-existing categories, but with some differentiation occurring within the categories. For example, in the "human" category, Risper now has the terms nyaθi "baby", jaduon "elder", ḡano "person", and nato "man", indicating that age distinctions are now made, as well as definite-infinite (man-person). She also at this age knew the terms for undomesticated as well as domesticated animals, as e.g. liəc "elephant" and simba "lion".

New verbs to appear were onge "to be absent", kia "to not-know", and neyo "to know, understand", all of which were discussed earlier. The verbs lwəkwə "to wash" and biro "to come" also appeared during this period.

At 27 months, we also have the first examples of possessive pronouns, first person singular -a and first person plural -wa. The latter marks the first appearance of the concept "we" or "first person plural". There were no new adverbs or adjectives recorded for the 27th month.

In terms of the original aims in the exploration of initial vocabulary (p. 46), the extent and range of vocabulary, the semantic domains named by the child, the "innominate" zones, and the nature of the generalizations of meaning have all been discussed. The latter does not seem to be pronounced in the children's speech. There are only a few examples in the children's speech of a multiplicity of semantic referents associated with a particular form, but this is probably a function of the

small sample size. For the final aim, the extent of homonymy, the evidence from the Luo children is totally negative. Homonymy is not extensive in adult Luo, in fact, almost non-existent, and it is therefore to be expected that it does not occur in child speech.

3.7.3 Grammar

3.7.3.1 Syntax. Two-word utterances began to appear in the nineteenth month for both Othieno (A2) and Aoko (B2). Risper (D) was in the two-word utterance stage at 21 months, and no information was available for Ochieng (C), except that he was using two-word utterances at the age of 25 months. At the age of 27 months, Risper, from available evidence, was not regularly using utterances of three or more words, and in terms of syntax, she is considered to be still in the two-word stage at this age.

Using the criterion of predication, two types of sentence construction may be identified in the children's speech, predicative and non-predicative (corresponding to the narrative and equational in Appendix A). In the latter, the word order was constrained to yield constructions of the type 'subject plus predicate nominative or locative.' The subject in these cases was a noun (or pronoun) and the predicate nominative could be a noun or an adjective. Examples of these are given in Table 8.

Predicative constructions were of two basic types, according to the functions of the utterances. Performatives (demands, commands) had the basic order VO (Verb-Object),

and descriptions of acts or states had the order SV(O), although in most cases the subject was marked by verb inflection. Examples of these constructions are given also in Table 8.

Table 8
Examples of Early Sentence Constructions

<u>Non-Predicative</u>			
<u>Type</u>	<u>No.</u>	<u>Utterance</u>	<u>Gloss</u>
N+N	(28)	en gini	"it thing-this"
N+loc.	(1)	en ka	"she here"
N+adj.	(12)	gino ber	"thing-that good"
<u>Predicative</u>			
V+N	(3)	ne tamtam	"see candy"
N+V	(30)	gare rIngo	"car runs"
N+V+N	(15)	aneno ŋungu	"I-see Europ."
N+V+loc.	(35)	mama ŋi lwəko	"mama went to-wash"

In terms of the original motivation for studying syntax, for investigating the early utterances with the goal of discovering pivot grammar, the present analysis can do no more than suggest that Luo children may have used such a grammar in the beginning stages of syntactic development. Unfortunately, the record is incomplete on this matter. Very few utterances were available for the period between the one-word stage and the appearance of hierarchical constructions,

created by use of inflection. Several conclusions can be drawn from what information is available, the most important being that from the outset, all of the utterances except one (number (2)) followed the model of adult speech in terms of word order.

A second conclusion is that the two-word stage appeared to be of very brief duration. Soon after the onset of two-word utterances, more complex constructions utilizing inflection began to appear. In Aoko's speech, for example, the time span was no more than one month, and was probably less.

The third point, a hypothetical one, is that granted the presence of pivot constructions, in the brief span of a two-word stage, the most likely candidates for pivots were the terms en "he, she, it", ne "see", and miya "give-me". These were all present early in the two-word stage, and in subsequent development, they appeared in combination with a number of other words. For example, en was used in combination with ka "here", gini "thing-this", and saa "clock" (2x); ne appeared with tamtam "candy" and mača "that"; miya "give-me" occurred with čam "food", tamtam (3x), pi "water" (3x), and ugi "porridge"; and ma was used with wando "visitor" and e "one" (11x).

More data would be required for a resolution of the problem of the existence of pivot grammar, but it may be concluded that pivot constructions do not occupy as important a position in the syntactic development of Luo

children as in their American counterparts.

Only a few utterances consisting of three or more words were collected for the age range of 19-27 months. Utterances containing the pivot construction ma e "this one" in combination with other terms were discussed earlier (pp. 69-71), and utterance (36) mača en gweno "that-there it chicken" also has been discussed (p.79). Utterance (35) mama ši lwoko "mama goes to wash", while an acceptable utterance syntactically, was inappropriate in the context in which it was uttered. The child's mother had already gone to wash, and the past tense then should have been indicated. The verb ši should have been prefixed with the past tense marker o-. Risper, from this evidence, did not seem to have the rule for forming past tense in the environment Noun_Verb. Utterance (35) forms an interesting contrast with (50) oši kulo "she-went to river". In the case of (50), the o- represents inflection for third person singular en, and the past tense marker is understood from the context. Utterances (35) and (50) differ, then, in that the subject is indicated syntactically in the first and morphologically in the second, which provides evidence that Risper was able to use verbal inflection to mark pronominal subject.

Utterance (35) is interesting also in that an infinitive lwoko "to wash" is used in conjunction with another verb form, ši. The utterance was a reply to a "wh" question (mama ɛɛ "mama is-where"), as was (50), but Risper replied by naming the activity of her mother rather

than giving a locative, as in (50). In Luo society, however, when one goes to wash, it is at a nearby stream or river, and Risper's reply was not ambiguous.

3.7.3.2 Morphology. The use of productive morphology seems to appear at a slightly later age than syntax in the grammatical development (using the regular appearance of two-word utterances as the criterion for early syntax). No use of inflection was present in Othieno's (A2) speech at 19 months, nor in Aoko's (B2) at the same age, unless it is assumed that terms such as miya had ceased to be monomorphemic. Inflection was present, however, in her 21st month, and likewise, there is evidence that Risper (D) at 21 months was capable of employing it. There are further examples of inflection in Risper's speech at 27 months, and it was present for Ochieng (C) at 25 months. The utterances showing inflection are given in Table 9.

Table 9
Inflection in the speech of B2, C, D

<u>Age</u> (in mos.)	<u>Utterance</u>	<u>Gloss</u>
	<u>B2</u>	
21	(13) oŋi Ulanda	"he-went to Ulanda"
21	(16) okelo	"he-brought (it)"
21	(17) okelo ma e	"he-brought this one"
21	(18) anenogi	"I-see-them"
21	(19) aneno ŋungu	"I-see European"
21	(28) <u>awane</u> :	"I-burned-him"

Table 9 (Continued)

<u>Age</u>	<u>Utterance</u>	<u>Gloss</u>
<u>C</u>		
25	(52) adway čam	"I-want food"
25	(53) ket kaya	"hunger bites-me"
<u>D</u>		
21	(32) amočo pi	"I-drink water"
21	(33) adwayo čam	"I-want food"
27	(38) mača sandwa	"that-there box our"
27	(39) akia	"I-don't-know"
27	(41) lweta	"hand-my"
27	(42) wiya	"head-my"
27	(44) toča	"shoe-my"
27	(45) akia	"I-don't-know"
27	(46) tienda	"leg-my"
27	(50) oči kulo	"she-went to river"

In Luo, personal pronouns, when used with a verb, are marked by inflection of the verb stem (the pronouns and morphophonemic rules are given in Appendix A). Nominative pronouns are prefixed, whereas objective and possessive forms are suffixed to the verb stem. From Table 9, it is clear that inflection for pronominal subject was present at 21 months. Numbers (13), (16), and (17) are instances of third person singular, en, o- + verb. Numbers (18), (19), (28), (32), and (33) show first person singular, an, a- + verb. Both of these forms are shown in later utterances,

but none of the other pronominals are represented as subjects. For objects, only one form is present at 21 months, third person singular in (28), -e. Third person plural is present in (18), but as indicated earlier, this could be simply a result of imitation. Number (53) provides an example of objective first person singular, -a (kayo + -a). Possessive forms are present in the 27th month, with all the utterances, (44) - (49), indicating first person singular, -a, except number (38), which shows first person plural, -wa. The morphophonemic rules accompanying the inflection were shown in Table 6.

From the available evidence, little can be said about the development of negation during the age range of 21-27 months. A child at 15 months is able to recognize questions, probably by terminal intonation rise, and he can give the negative response 'a'a. The negative command weya "stop; leave me alone", was present at 18 months, and the "negative" verbs onge "to be absent" and kia "to not-know" were present at 27 months. There were no instances of the use of the negative particle ok or the negative command kik.

In capsule form, the development of language for a Luo child in the age range of 12-27 months, appears to be as follows. Babbling terminates in the age range of 17-18 months; the first lexical items appear at 12-14 months, and there is relatively slow development until the 18th and 19th months, at which time, most lexical items are nouns; two-word utterances appear at 19 months; verb inflection appears at 21 months and probably earlier; utterances

of more than two morphemes are present as early as 21 months, but with a very low frequency; and the common adults forms of negation are not present.

Table 10 provides a summary of the major features of the acquisition of morphology and syntax. The numbers represent the age for the earliest appearance of each feature shown in the table.

Table 10
Acquisition of Syntax and Morphology, Children A2, B2, C, D

<u>Syntax</u>					
<u>Type</u>	A2	B2	C	D	
Non-predicative					
N+N	--	20	--	27	
N+loc	19	20	--	--	
N+adj.	--	21	--	--	
Predicative					
V+N	--	19	25	20	
N+V	--	21	--	27	
N+V+N	--	21	25	20	
N+V+loc.	--	21	--	23	

Morphology

Noun inflection:

Possession	--	--	--	27
------------	----	----	----	----

Verb inflection:

Subject	--	21	25	20
---------	----	----	----	----

Object	--	21	25	--
--------	----	----	----	----

Suffixation:

Demonstratives	--	21	--	27
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CHAPTER 4

LANGUAGE DEVELOPMENT: 28-35 MONTHS

4.1 INTRODUCTION

By the age of 27 months, Luo children have acquired the ability to use some of the basic aspects of the Luo language. Their lexicon includes nouns, pronouns, verbs, adverbs, and a few adjectives. Their morphology has become productive in the area of verb inflection for marking pronominal subjects and past tense, and in the area of syntax, they use pivot constructions and a few utterances of greater morpheme length. In the present chapter, evidence presented in the speech of two older children will be examined, primarily to trace further development in grammar.

4.2 SPEECH SAMPLES OF RABUOGI (G)

Child G in the sample, Rabuogi, was 27 months of age at the beginning of the study, and like the other children, he seemed reticent to talk in our presence during the first visits to his home. Despite his relatively advanced age, it is likely that he was not advanced in his speech development at that time. His father reported that he was able to say only a very few words, and these were mostly names of objects located in the homestead. He was not able to give the names of the family members, but when asked to point to them, he could follow the instructions without a mistake.

Rabuogi's father reported that Rabuogi was at the stage where he tried to imitate adult activities, and he pointed to some scratches in the soil nearby where Rabuogi had been "hoeing". The imitative behavior also extended to his speech. During this particular visit, pictures were being shown to Rabuogi's older brother, Oware, and he was asked to name the objects in the pictures. Rabuogi, standing nearby, imitated some of the remarks, which, according to his father and brother, were the first instances of his verbalization of the terms, which were ɔ̃ok "cattle", paka "cat", and ɔ̃ano "person".

From the available evidence, then, Rabuogi's speech was not advanced at the 27th month, and in fact, was considerably less developed than Risper's (D) at the same age.

In the following month, a few samples of Rabuogi's speech were collected, and although the sample size is small, there is some evidence that he was at the two-word pivot stage. In the observation period, Rabuogi made the following remarks. It was mid-morning, the time of day for the first meal, and Rabuogi was attempting to get something to eat. He said to his mother (54) adwayo ɔ̃am "I-want food". He was busy and directed him to his older sister, Owuor, to whom he repeated his request (55). She fed him, and then his mother sent him into the house to get some medicine that he was to take. He returned, carrying the bottle of medicine, and reporting (56) mama,

čam yaə "mama, eat medicine". Although it isn't entirely clear from the context, Rabuogi was probably telling his mother to "eat" the medicine, rather than describing what one normally does with medicine, i.e. one eats it. His next comment was (57) ičamo? "you-eat?", to which she replied "yes". Later, Rabuogi, still hungry, told his mother (58) miya buon /rabuon/ "give-me potato". Still later, Okumu, in trying to persuade him to talk, asked mama ɛrɛ?, and Rabuogi replied (59) en kača "she there", pointing to where she was standing.

In the following month, the 29th, Rabuogi continued to learn the names of objects in the immediate environment of the home and to learn new verbs and adverb forms. New verbs were yudo "to find", čando "to trouble, bother, annoy", and tamo "to defeat", and new adverbs were podī "still, not yet" and pək "heavy". Podī was a response to his mother's question isečamo? "you-have-eaten?", and (60) ičanda "you-annoy-me" was said to his brother, who was aiding us in persuading Rabuogi to talk by asking him questions. Other utterances collected at this time were (61) miya moro "give-me more"; (62) oluru ođi e gVnda "quail went to garden"; (63) mičungu omiya tamtam "European give-me candy" in response to the question ɲano ma omiyi tamtam? "who (is it) who gave-you candy?"; and (64) baras otama "brush defeated-me", said after he had followed his father's request dak ikelo baras? "why-don't-you-bring brush?" and was not able to find the brush.

Utterances (62) and (63) are of special note in that they represent the first examples of noun subjects for Rabuogi, and they are also the first utterances of more than two words. He also has shown that he has internalized the rule for marking past tense, with o- occurring in the environment Noun __ Verb. In (62), oluru oŋi e gUnda "quail went to garden", he has used the correct prepositional form e "to", which must be employed when a specific destination is indicated by the verb, as e.g. gUnda in this case. Utterance (64) baras otama "brush defeated-me" expresses the Luo formula for indicating lack of ability or success in some specific endeavor. The Luo speak of a failure as a defeat. Failing an examination, for example, is expressed as "the exam defeated me", or as in (64), "the brush defeated Rabuogi".

In the 30th month, we were able to obtain a relatively large sample of speech from Rabuogi, although most of the speech consisted of answers to questions. In contrast with question-answer sessions with other, younger children, many of Rabuogi's replies (over 50%) were of two or more morphemes in length. All of these utterances were collected at one interview, with Okumu asking most of the questions. The utterances are given in Table 11.

Table 11
Recorded Speech of Rabuogi at 30 Months

OkumuRabuogiere mama?

"where-is mama?"

(65) mama čande oa e gUnda"mama that (you spoke of)
left-for garden"ere baba?

"where-is father?"

(66) baba čande obet piny"father that is-sitting
down"mama iwačo ni timo ano?

"mama you-said is-doing what?"

(68) omoyo odUma

"she (is)-drying maize"

Uhuru ere?

"Uhuru is-where?"

(69) Uhuru ičande..

"Uhuru you-spoke-of.."

otimo ano?

"he-doing what?"

(70) obet piny

"he-sitting down"

gweno ere? en mar na?

"chicken is-where? it of who?"

(71) gweno ičande mar baba"chicken you-speak-of of
father"ere mari in?

"where-is yours?"

(72) mar baba

"of father"

Table 11 (Continued)

OkumuOwuor to ođi kanye?

"Owuor went where?"

in to dak iđi skU1?

"you and why-don't you-go to school?"

nano?

"why?"

gUnda ere?

"garden is-where?"

ođi timo ano?

"he (father) is-going-to-do what?"

ođi gi kwər koso gi beti?

"he-went with hoe or slasher?"

mama to ođi timo ano?

"mama then went to-do what?"

ođi gi kwarkoso gi beti?

"she-went with hoe or with slasher?"

Rabuogi(73) ođi skU1

"she-went to school"

(74) a'a'. adagi

"no. I-refuse."

(75) onge

"no reason"

(76) gUnda e ča:

"garden one there"

(77) ođi beto

"he-goes to-harvest"

(78) ođi gi beti

"he-went with slasher"

(79) mama ođi pur

"mama went to-cultivate"

(80) ođi gi beti

"she-went with slasher"

Table 11 (Continued)

<u>Okumu</u>	<u>Rabuogi</u>
<u>in bende ida puodo?</u> "you also you-go-usually to garden?"	(81) <u>adi ga beto</u> "I-go-usually to harvest"
<u>bedi ere?</u> "slasher-your is-where?"	(82) <u>beda onge</u> "slasher-my absent"
<u>Ohuru ema omiyi nyUka gi</u> <u>agwata koso gi suðuria?</u> "Ohuru only gives-you porridge with gourd or with sauce-pan?"	(83) <u>gi siðiria</u> "with sauce-pan"
<u>a umaðo nyUka gi na?</u> "(past tense) you (pl.)-drank porridge with whom?"	(84) <u>gi Ohuru</u> "with Ohuru"
<u>idwa ði kanye?</u> "you-want to-go where?"	(85) <u>ir mama</u> "to mama"
<u>idwa ði mama omo ano?</u> "you-want to-go-to mama to- get what?"	(86) <u>adwa ði ir mama</u> "I-want to-go to mama"

Utterances (65), (66), and (69) show examples of over-extension or over-regularization of the use of a term by Rabuogi. The term ðande may be glossed as "that" or "which", and it is used in instances that are potentially

ambiguous, i.e. in which there may be some doubt as to the specificity of the referent. The term specifies the referent by relating it to a particular noun given in a previous utterance. A more adequate gloss, then, would be "that person (or thing) referred to in the previous remark" or "that person you spoke of". Rabuogi's use of the form, while grammatically correct, was not obligatory, since there was no ambiguity as to the possible referent. Utterance (71) gwəno ičandə mar baba "chicken that of father", however, was appropriate. Several chickens were nearby, and Rabuogi identified a particular one as belonging to his father. As shown in (71), the form čandə can also be used with a subject, making (71) a case of a nested construction (cf. Chomsky 1965:12).

Rabuogi, in utterance (81) ađiga beto "I-go-usually to-harvest", illustrates his capacity for the use of the adverbial suffix -ga, which means "usually" or "habitually". In the preceeding utterance, Okumu used the truncated form in iđa (iđi + (g)a), but Rabuogi expanded it in his utterance, indicating that it is a part of his linguistic repertoire.

Utterance (82), beda onge "slasher-my absent", appears to be an unusual way of expressing the notion of "being without + object", i.e. by showing possession (beti + a beda) and using it with a 'negative' verb, but this mode of expression is perfectly acceptable in Luo. There are other ways of expressing the same idea, with aongego "I-

am-without-it" being a more common one, but Rabuogi's expression is acceptable.

Some more speech samples were collected in the following month, the 31st. After Rabuogi had greeted us by shaking hands and saying misawa, Okumu asked him where his father had gone. Rabuogi answered (87) baba oži loka Utoma "father went up-there-to Utoma". Then in response to mama ere?, he said (88) mama oži e siro "mama went to market". Other utterances were: (89) miya tamtam "give-me candy"; (90) neye ma "see-it this", said to his brother as he was showing him a piece of candy; (91) kono čandš "beer there", in response to his mother's question kono ere? "beer is-where?"; (92) baba oži lokača "father went up-there", in response to his mother's question ere baba? "where-is father?"; (93) miya ouno "give-me breast", said to his mother as he was sitting in her lap; and (94) mano toka in? "that car yours?", said to his brother, who was playing with a toy clay car.

In the 32nd month, the following utterances were collected. Rabuogi had just returned from the river, bringing some water back to the homestead. Okumu asked him where he got the water, and Rabuogi replied (95) bar kača "river there". To the question aye un gi na? "then you and who (went)?", he replied (96) wan gi Odindo "we and Odindo". Rabuogi approached Oyugi, who was taking notes while observing him, and demanded (97) miya kalam "give-me pencil". He then began to point to the control

knobs on the tape recorder and said gi, gi, gi, gi "thing, thing...(in a counting fashion). He tried to turn the knobs, and his brother, who was responsible for Rabuogi's behavior, grabbed his arm to prevent him from touching the tape recorder. Rabuogi shouted at him (98) we maka, we maka "stop grabbing-me...". Rabuogi began to examine Oyugi's notes, and Oware (his brother) encouraged him Rabuogi, some gigo, som gigo "Rabuogi, read things-those, read things-those", but Rabuogi simply pointed at the letters and said (99) koni gi koni "on both sides/side by side".

In the following month, when Rabuogi was 33 months old, we were able to collect another question-answer type sample. The major features of the conversation are given in Table 12.

Table 12
Recorded conversation between Okumu and Rabuogi
(33 months)

<u>Okumu</u>	<u>Rabuogi</u>
<u>a: upuroga kod na?</u>	(100) <u>kenda</u>
"(past tense) you cultivate- usually with whom?"	"only-I"
<u>mama ere?</u>	(101) <u>ičogo:</u>
"mama is-where?"	"that-way"
<u>mama timo aŋo?</u>	(102) <u>obaro yItn</u>
"mama is-doing what?"	"she-splits firewood"

Table 12 (Continued)

<u>Okumu</u>	<u>Rabuogi</u>
<u>Owuor to timo ayo?</u>	(103) <u>oywečo</u>
"Owuor then is-doing what?"	"she-is-sweeping"
<u>baba grę?</u>	(104) <u>oičo loka</u>
"father is-where?"	"he-went up-there"
<u>loka kanye?</u>	(105) <u>korgi</u>
"there where?"	"side-this"
<u>ma e ayo ma Pitalis nigoni?</u>	(107) <u>en gini</u>
"this one what which Pitalis has-here?" (talking about Pitalis's shirt)	"it thing-this"
<u>en gwęnd na?</u>	(106) <u>gwęnd baba</u>
"it chicken-of who?"	"chicken-of father"
<u>to ma ayo man e tiendani</u>	(108) <u>en wucče</u>
"and this what which-is on foot-my here?"	"it shoes"
<u>en nano Rabuogi man e dira kaeni?</u>	(109) <u>en misungu</u>
"it who Rabuogi who-is at side-of-me here?"	"it European"

Table 12 (Continued)

<u>Okumu</u>	<u>Rabuogi</u>
<u>to mano aŋo ma otiŋo e lweteni?</u> "and that what which he-holds in hand-his here?"	(110) <u>en kalani /kalatas/</u> "it paper"
<u>mača to aŋo maračar ma ondikoni?</u> "that then what white which he- writes-on?"	(111) <u>gire</u> "thing-his"
<u>kom ŋa?</u> "chair whose (that you are sitting on)?"	(112) <u>kom baba</u> "chair-of father"
<u>en ŋuon ŋa?</u> "it rooster whose?"	(113) <u>ŋuon baba</u> "rooster father"
<u>to ma e, ma e aŋo močunni?</u> "and this one, this one what which-is-standing-here?"	(114) <u>en bao</u> "it board"
<u>to mača, ma gwen ni tiende ni?</u> "and that, this chicken at feet-his here?"	(115) <u>en gweno</u> "it chicken"
<u>to ma en aŋo?</u> "and this it what?"	(116) <u>en dero</u> "it granary"
<u>to mača en aŋo?</u> "and that it what?"	(117) <u>en dero</u> "it granary"

Table 12 (Continued)

<u>Okumu</u>	<u>Rabuogi</u>
<u>en od na?</u> "it house-of who?"	(118) <u>od baba</u> "house-of father"
<u>gweno manade?</u> "chicken what-kind-of?" (is that over there?)	(119) <u>gwen madičol</u> "chickens which-are-black"
<u>gwen manade?</u> "chickens what-kind-of?"	(120) <u>gin dičol</u> "they black"
<u>to man but ŋen to aŋo man</u> <u>en dir doot ča?</u> "but that near stool then what which-is near doorway there?"	(121) <u>en jiko</u> "it kitchen"
	(122) <u>pod 110</u> "still hurts" (previous conversation was about his hand, which was burned several days before; he was commenting that his hand still hurt him).
<u>mama ookoni ni iči pur koso</u> <u>aye iouro apura kendi?</u> "mama outside here has you to- cultivate or do you cultivate by yourself?"	(123) <u>a: apuro apura kenda</u> "I have cultivated just by-myself"

Table 12 (Continued)

OkumuRabuogiupuroga gi Pitalis?

"you usually cultivate with
Pitalis?"

to mača ano moyIəŋrə itado ča?(124) en ton Ohuru

"and that what which-is-leaning-
against roof there?"

"it spear Ohuru"

mača en ma e Rabuogi, moyIəŋ(125) en pare tado kae mi?

"that it which one, Rabuogi,
which-leans-against roof here?"

"it mat"

to man e dir par ča ano?(126) en par

"but that which near mat there
what?"

"it mat"

a'a', maraten' man e dir par(127) en ɕigomoyIəŋrə e kor ot ča?

"no, black which is near mat
which-leans-against side of
house there?"

"it door"

iwačo ni en ano, Rabuogi, ma(128) en gwanoouum go gwan ča?

"you-said that it what, Rabuogi,
which covers those chickens there

"it chicken"

(talking about a basket covering some chickens).

Table 12 (Continued)

<u>Okumu</u>	<u>Rabuogi</u>
<u>to man e dir ot ka; gik ma</u>	(129) <u>en čuočo</u>
<u>obiwre e dir ot maneny ka gin</u>	
<u>ano?</u>	
"and this which is near house	"it excrement"
here; things which are near	
house many here they what?"	
<u>momo elar ka gin ano?</u>	(130) <u>gin obando</u>
"things in courtyard they what?"	"they maize cobs"
<u>nano ma omoyo obando?</u>	(131) <u>akia</u>
"who (is it) who-dried cobs?"	"I-don't know"
<u>Owuor ča timo ano?</u>	(132) <u>oywečo</u>
"Owuor there is-doing what?"	"she-is-sweeping"

Utterance (105) korgi is an incorrect usage. Kor is a noun (or noun construct) meaning "side", gi is plural demonstrative adjective suffix, "these", and although they may appear in the form korgi, it is unusual and in the context in which Rabuogi used it, inaccurate. The correct response to the question loka kanya? "up-there where?" would have been koni, "this-side".

In (111) gire "thing-his", Rabuogi correctly used the construct gir- (of gi "thing") and suffixed the proper possessive form -e "his". His confusion in (105) may have derived from the 'inconsistent' rules for the formation of

constructs, e.g. an r is deleted for kor in koni "this-side" and added for the construct of gi, gir-.

Utterances (119) gwen madičol "chickens which-are-black" and (120) gin dičol "they black" provide an interesting comparison, in that the relative pronoun ma is used in one expression and not the other. In Luo, noun modifiers are preferably expressed in the form of relative clauses, so that in (119) the preferred form is madičol "which-are-black" rather than simply dičol. In ostensive or translativ sentences with pronoun subject, as e.g. (120), the relative pronoun is not used, and Rabuogi was able to handle this cooccurrence restriction rule successfully at this age.

In utterance (123), a: apuro apura kenda "I have cultivated just by-myself", two new features have appeared in Rabuogi's speech. The initial a is a past tense marker, an adverbial form indicating that an action was just recently completed. The form had been used several times by Okumu in the course of the conversation, and it is possible that Rabuogi was simply imitating, as a always occupies initial position in the sentence and recall or memory would be easy. However, the utterance immediately preceding (123) did not contain the form. Utterance (123) in fact contained lexical items from the three previous utterances' of Okumu, indicating that Rabuogi was able to generate the appropriate syntax for linear ordering of the lexical items. In addition to the adverb a, one of the features in (123) was the use of reduplication to give

apuro apura "I just cultivated". Reduplication is used for Luo verbs to mark an action as simply or merely being carried out (it also has other grammatical functions), i.e. it is an adverbial derivation. The rules for its production are: (1) the **verb** stem is repeated, and (2) it is prefixed and suffixed with the particle a. Rabuogi used the form correctly.

In the final month of observation, Rabuogi's 34th month, the following utterances were collected. He had been given a piece of candy, which he held out for his mother to see, and said (133) ma to amuodo "and this I-eat (by grinding with the teeth)", and (134) ma to akano "but this I-keep". He then asked his mother (135) barna ma "split-for-me this". His mother reported that he had taken his first ride in an automobile a few days earlier, and he had been terrified. Oyugi asked him why he had been afraid, iluor najo?, and he replied (136) mačača to koro rača "motor-car-that then bad-for-me". Oyugi asked en ajo ma rač? "It what which is-bad?"; Rabuogi replied (137) mitokača koro rača "motor-car-that then bad-for-me." Rabuogi was still playing with his candy and said (138) dan' anyul tantambni duto "I would like I-put-in-my-mouth candy-this all". To his brother he said (139) en to koro imuodo amuoda "it and then you chew just" and (140) ne kaka omuodo "see how he-chews". To Oyugi he said (141) neye laku "see-it tooth-my". Oyugi asked ajo ma otimo laki? "what (is it) that happened-to tooth-your?", and Rabuogi

replied (142) tamtam motimo laka "candy is-that-which-did-it-to tooth-my". Then he addressed his brother, trying to push him out of a chair, (143) dan' agoli piny ku "I would
"I would like to-push-you down here."

Later, as Oyugi was preparing to leave, Rabuogi pointed to one of his pockets and said (144) tamtam onge ka? "candy isn't here?" Oyugi replied onge "not any", and Rabuogi pointed to the other pocket and said to koni? "but this-side?". Oyugi asked idwaro tamtam kende? "do-you-want candy only?", to which Rabuogi replied (146) kel ku "bring (it) here". As Oyugi was leaving, Rabuogi asked (147) ibiro duogo? "are-you-going to-return?".

Rabuogi's speech in the 34th month contained several new features. One is the conjunction to which can mean, depending on context, either "but" or "and". Where a contrast is indicated, as in (133) ma to amuodo "this and I-eat" and (134) ma to akano "this but I-keep", the term is maximally contrastive, i.e. "and...but...". Sometimes, however, the meaning of the term is not clear, and often it is used as a conjunction in a neutral way, i.e. a conjunction is required syntactically, but the semantic load is unimportant. The term to is also used as a device for specifying antecedent referents. In (136) mačača to koro rača, for example, to refers to the motorcar mentioned by his mother in her preceding remark, and Rabuogi's remark is "but/and then that motor car was bad for me". The element koro functions in the same manner, meaning "now

or "then". In utterance (137) mitokaca koro rača, Rabuogi states "then, that motor car was bad for me." To and koro often appear together, as in (136) and (139), en to koro imuodo amuoda, and they can have any of the four meanings, "and now", "and then", "but now", and "but then", as well as serving the role as filler.

Another new feature is the use of the conditional particle daŋ' in utterances (138) daŋ' anyul tamtambni duto "I would like to put-in-my-mouth candy-this all" and (143) daŋ' agoli piny ku "I would like to push-you down here". The term daŋ' is a concatenation of a conditional marker da and a future tense marker aŋ', and may be glossed as "would like". As neither conditional markers or future tense markers per se have appeared in his speech Rabuogi probably learned the particle as a unit. Its position is regular, always occurring initially, and the syntactical rules for its use are not complex. Rabuogi's uses of the particle were both syntactically and semantically correct.

In utterance (147), ibiro duogo "are-you-going to-return?" Rabuogi gives the first use of the common expression of future tense in Luo. Although there are future tense verbal particles, as aŋ' cited above, the preferred way of expressing the future is through the use of the auxiliary verb biro "to come", which glosses into English as "going to". Utterance (147) was spontaneous, indicating that the ability to use the expression is part of his linguistic proficiency.

4.3 SPEECH SAMPLES OF AKINYI (H)

Akinyi, child H in the sample, was 28 months old at the beginning of the study, and there is available a monthly comparison of her language development with Rabuogi's. As such, a summary of the major features of Rabuogi's speech will be deferred until Akinyi's speech samples are given, in order to facilitate comparison of the two children's abilities.

Akinyi was also shy and speechless in our presence. On the first visit, she hid behind the house, peered around the corner at us, and refused to be coaxed from her hiding place until her father returned home. It was not possible to collect any speech samples on this visit, but her mother volunteered some information. She reported that Akinyi was able to talk, but that she could not say very many things. She knew a few words, most of which she used alone in one-word utterances, but she would occasionally use a few words together, such as (148) adwayo xiemo "I-want food" and (149) adwayo pi "I-want water".

Akinyi, like Rabuogi, was at the stage at which she imitated many adult activities. Her mother reported that Akinyi would imitate her whenever she was cooking. Akinyi would mix soil with water, pretend to cook it over the fire, and had to be watched carefully or else she would eat the concoction. Her mother said that Akinyi seemed to learn new words by imitating them, by hearing them spoken by older people and then repeating them afterwards.

A month later, when Akinyi was 29 months old, it was possible to collect only a small amount of information about her speech. During the visit, Akinyi was eating her breakfast of porridge, and after satiation, she handed the drinking-cup to her older sister, saying (150) ma, ma nyUka "drink, drink porridge". As cited earlier, the term ma in Luo means "this", and (150) could be interpreted as "this porridge", but in this case, it was obvious that she meant "drink", for she held the cup up to her sister's mouth, indicating that she should drink it. Okumu and Oyugi both interpreted the meaning as "drink", so it can be concluded that Akinyi meant that and used the term ma instead of the correct maŋ. Other speech samples collected in this month were: (151) adagi "I-refuse", said to her sister Asira, who wanted her to do a small chore for her; reč "fish", which Akinyi generalized to cover all solid food, according to her mother's report; and paka "cat", Akinyi's term for both cats and small goats.

During the same visit, an attempt was made to elicit speech from Akinyi by having her mother show her a picture book and ask her questions about it. The attempt was not successful. Most of her mother's questions were answered with u:, which in adult Luo is a negative indicating disgust or boredom, but it was not clear if Akinyi used the term in that manner; with e:, "yes"; a: (not intelligible); and ma "this", uttered as she pointed at the book. Occasionally she would merely repeat the final element of the

question.

In the 30th month, Akinyi's speech was still limited, but she had made some definite progress. She was better able to carry out instructions given to her by members of the family, indicating that her comprehension was improved. Her father demonstrated for us her ability to follow instructions and her knowledge of the names of objects in the homestead. For example, he would send her to collect some tworo "sisal" and bring it to him, and she would comply. There was almost no verbalization on her part; she simply performed the chores in silence. One exception occurred when she brought him a cup, which, she discovered, had a hole in it. She pointed to the cup and remarked (152) otu, otu /otuč/ "it has a hole...". Okumu asked her are kama otuč? "where-is hole?", and she replied, pointing to the hole (153) ka otu "here is-hole".

Later in the same visit, we recorded the following: (154) miya čak "give-me milk", said to her mother; (155) miya bolo /rabelo/ "give-me banana", said to her mother after Akinyi had finished her milk; and (156) adwa pi "I-want water", said to her mother, who was drinking water from a gourd; (157) piyoiy keč /pilupilu/ "peppers hot", said to her father, who told her to take some peppers into the house; and (158) miya tamtam "give-me candy", said to Okumu, who was giving candy to the other children present.

Akinyi's speech samples for the 31st month were collected in a question-answer session with her mother, and they were

almost all one-word utterances. An exception was (162) ne tantam "see candy", uttered twice, in response to her mother's questions Akinyi, ok imiya? "Akinyi, not you-give-me?" and iči ineve gino? "you-go-to show-it thing-that?" It is interesting that at this age, Akinyi's responses to questions were in the form of one-word utterances. Her performance contrasts markedly with Rabuogi's performance in the 20th month in which the majority of his responses were of two or more morphemes. Some of the questions were asked in each setting were practically identical, such as gweno ere? "chicken is-where?", en nar na? "it of who?" for Rabuogi, which he answered (71) gweno ičanda nar baba "chicken you-speak-of of father" and for Akinyi, ma ano? "this what?" and en gwend na? "it chicken-of who?", to each of which she replied gwɛn "chickens".

Only a few speech samples are available for the 32nd month. Her mother, who had been working in the garden, returned to the homestead and asked Akinyi baba oči kanye? "father went where?". Akinyi replied (163) owuok "he-left". Her mother asked kod na? "with whom?", and Akinyi replied (164) giči gi kwara "they-went with grandfather". Some more samples were collected in the 33rd month. The observation for the visit was made during the family's mid-morning meal. Akinyi, eating an ear of roasted maize, discovered that one end of the ear was slightly burned. Showing this to her father, she asked (165) baba, ma ano? "father, this what?". He replied rač "bad". She then

asked (166) baba, itiekoko? "father, are-you-finished?". A minute later, she pointed to the burned kernels on the ear of maize and remarked (167) baba, ma rač "father, this bad". After she finished eating, she started to go into the house, and as her father accompanied her, she asked (168) baba, ibiro? "father, you-coming?".

When Akinyi returned from the house, she approached her older sister, who was sitting on the ground holding a baby. Akinyi said to her (169) mi Sabomo "give Sabomo" (the name of a young boy who was present), but as Akinyi was carrying an orange, it wasn't clear if she meant "give the orange to Sabomo" or "give the baby to Sabomo". Her sister didn't react. Akinyi then asked (170) ma čungu? "this European?", speaking of the baby. Again, there was no reaction. Akinyi turned to her father and said (171) baba, weya "father, let-me". The meaning of her utterance isn't clear. As noted earlier, the verb weyo means to "leave alone, let alone, stop", but in this situation, her father interpreted it as "where do you want to go?", i.e. "where is it that you want to go if I let you", as indicated by his question idwaro či kanye? She did not reply.

Information was collected also for the 34th month, in the form of a question-answer session between Akinyi and her father. Akinyi's utterances of more than one morpheme in length are presented below in Table 13.

Table 13
Recorded conversation between Akinyi and her father
(34 months)

<u>Father</u>	<u>Akinyi</u>
<u>ma ano?</u>	(172) <u>wane</u>
"this what?" (talking about a doll Akinyi held)	"eye-her"
<u>to ma?</u>	(173) <u>une</u>
"and this?"	"nose-her"
<u>to ma?</u>	(174) <u>iea</u>
"and this?"	"ear-her"
<u>mondo otim nadi?</u>	(175) <u>oɔamu</u>
"in-order-to do what?" (i.e. you were given a piece of candy so you could do what?)	"to-be-eaten"
<u>en nyaθi na?</u>	(176) <u>en ɛi ʒunɔ</u>
"it baby whose?" (talking about the doll)	"it baby European"
<u>nyaθi mar na?</u>	(177) <u>mara</u>
"baby of who?"	"mine-of"
<u>mar na?</u>	(178) <u>mari</u>
"of who?" (talking about a cigarette her father was smoking)	"of yours"

Table 13 (Continued)

<u>Father</u>	<u>Akinyi</u>
<u>nano ma omiyi; omiyi ano?</u>	(179) <u>Auma omiya nyUka</u>
"who (is it) that-gave-you; she-gave-you what?"	"Auma gave-me porridge"

The final month of observation for Akinyi was her 35th month. A few speech samples were collected during this month, again at the homestead. Akinyi greeted Oyugi and then requested (180) miya tantam "give-me candy." Her older sister, in jest, tried to take away Akinyi's candy, but she protested (181) we tantamba "leave-alone candy-my". Her sister asked Akinyi ere siruači? "where-are clothes-your?", to which she replied (182) siruača mama kano "clothes-my mama keeps" (according to Oyugi, it should be okano "kept"). Then, in response to Akinyi, isetieko tantambi "Akinyi, have-you-finished candy-your?", she replied (184) a'a', ne tantam "no, see candy". Akinyi then asked (185) ma tenda? "this stool-my?". Her sister replied mano tend Auma "that stool-of Auma", but Akinyi insisted (186) adwa tenda "I-want stool-my", (187) ma tenda "this stool-my". A small boy present, Sabomo, was playing with a scarf, tying it around his head. Akinyi exclaimed (188) ee! Sabomo tweyo kitamba "ee! Sabomo ties scarf". Akinyi wanted the scarf, reporting to her sister (189) Asira, adwa kitamba "Asira, I-want scarf", and calling (190) Sabomo, bi ka "S..come here", (191) twe wane "tie head-her".

4.4 SUMMARY

4.4.1 Rates of Development. A comparison of Rabuogi's and Akinyi's speech acquisition over an eight month period indicates a differential rate of growth, and if we view their acquisition in relation to the level of development exhibited by Risper at 27 months, the degree of individual variation is even more pronounced. At 27 months, Risper was using, productively, pivot constructions and inflection, both of which had been present in her speech for several months. She also at 27 months had a relatively extensive vocabulary, to the extent that she could name most of the objects with which she came into contact during normal daily routines.

Rabuogi, at 27 months, appeared to be much less advanced, although it is necessary to exercise caution in forwarding this claim. His 27th month was the first month of observations, and the factors of fear and shyness undoubtedly functioned to reduce his speech production. Nevertheless, according to his father, mother, and nursemaid, he could say only a few words and was not able to give the names of members of the family. He was fully capable, though, of decoding messages, as he was able to follow instructions readily and without mistakes. In the following month, his 28th, both inflection and pivot constructions were present in his speech, and in this respect, his speech for that month was comparable to Akinyi's. In his 29th month, however, Rabuogi advanced considerably, three and four-word

utterances making their appearance, with some new features being endocentric noun phrase constructions, ((65) mama čanda oa e gUnda "mama you-spoke-of-has-left for garden"); past tense markers ((62) oluru ođi e gUnda "quail went to garden"); and unstressed elements, such as prepositions (the particle e in (62) and (65)). These features of his speech were regular for the subsequent months of his development, and in the 34th month, examples were present for the use of the present conditional tense ((138) dan' anyul tamtambni duto "I would like to put-in-my-mouth this candy whole") and for the use of relative clauses ((142) tamtam motimo laka "candy is-that-which-did-it-to tooth-my").

Rabuogi, then, was a slow beginner in language development, but once he began to acquire grammar, new features were quickly incorporated into his system, indicating that his cognitive development was in advance of his linguistic development. His ability to follow directions, i.e. his comprehension model, seemed to be roughly at par with Risper's and Akinyi's, but there was an initial delay in the generation of a speech production model.

Akinyi, whose level of development at 28 months, seemed slightly lower than Risper's at 27 months, did not show the same marked, rapid increase as Rabuogi had shown. Two-word utterances and inflection were definitely present in the 29th month, but grammatically, her speech in the 30th and 35th months was at essentially the same level. Her progress was represented in the acquisition of new terms

and the regular use of these within the same grammatical framework, although some new items did make their appearance, such as past tense markers ((179) Auma omiya nyUka "Auma gave me porridge"). From the available evidence, introduction of new features into Akinyi's speech paralleled the process of development in Rabuogi's. Two particular features in the advance to the three-word stage were: 1) noun subjects were used, whereas in earlier speech, almost all subjects in the noun phrases were pronominal; and 2) with a noun subject, an obligatory marker for past tense was added to the verb form, i.e. in the environment Noun ___ Verb.

Although there is individual variation in the rate of grammatical development for Luo children, the direction of the direction of the development seems to be patterned. There are, in other words, stages of development that need not correspond closely with chronological age. For the younger children in the sample, A2; B2 and D, the two-word stage was clearly present in the age range of 19-21 months. For Rabuogi and Akinyi, it began at approximately 28 months, but Rabuogi, two months later, was clearly in a more advanced stage. His two-word stage was of such short duration that it is not possible to identify clearly a pivot grammar in his speech. In his speech in later months, pivot type constructions continued to appear, but a pivot grammar could not account for the complexity of the speech. The same qualification holds for Akinyi's speech development.

The presence of a pivot grammar in Rabuogi's and Akinyi's speech cannot be positively identified, but the possibility remains that pivots may have been present. The sample size for all of the Luo children is small, to the extent that the distributional evidence may have been insufficient not only for the discovery of words in the lexicon that might have been acting as pivots, but more importantly, that the place of pivot constructions in overall language development might be obscured. The problem remains unresolved, but from the available evidence, it seems clear that although Luo children may employ pivot constructions in the earliest stage of their grammatical development, their early systems soon become morphologically productive. Types of grammatical relationships that are expressed syntactically in English pivot grammars, as e.g. possession, are expressed morphologically in Luo. The importance of pivot constructions in Luo is not directly comparable to their place in English, since identical functions of speech, i.e. communication of the same ideas, are expressed through syntactic relations in English and morphological devices in Luo.

4.4.2 Lexical Items. The early acquisition of lexical items by Rabuogi and Akinyi parallel the categories expressed in Table 7 for the younger children. Not all of the lexical entries were duplicated by Rabuogi and Akinyi, but the relative order of acquisition and the basic categories were constant. Some new items did appear in their vocabularies

in the post-28 months range, and these are shown in Table 14.

Table 14
Lexical items; post-28 months

<u>Category</u>	<u>Children</u> (age in months)	
	G	H
Prepositions		
e "to, in, at"	29	--
mar "of"	30	--
ir "toward"	30	--
gi "with"	30	32
ni "for"	34	35
Particles		
o- (past tense)	29	34
a "recently"	33	--
daŋ' "would like"	34	--
ma "which, who"	34	--
Auxiliary Verbs		
dwa(yo) "Want"	--	30
we "stop"	32	35
biro "come (going to)"	34	--
Adverbs		
moro "more"	29	--
-ga "usually"	30	--
pod "still"	33	--

Table 14 (Continued)

<u>Category</u>	<u>Children</u>	
	<u>G</u>	<u>H</u>
Adverbs (continued)		
a...a "just"	33	--
kende "only"	33	--
Conjunctions		
gi "and"	32	--
to "but, and"	34	--
koro "and, then"	34	--
kaka "how"	34	--

As can be seen from the table, the new items are function words. The earliest terms to appear in the children's vocabularies were content words, nouns, pronouns, and verbs, as is clearly shown in Table 7. Once a significant vocabulary of content words is accumulated, the children begin to add function words, with prepositions appearing first, then particles and auxiliary verbs, and followed by adverbs and lastly, conjunctions.

4.4.3 Grammar. Early grammatical development for Rabuogi and Akinyi follows a similar pattern as that for the younger children. In the area of syntax, both predicative and non-predicative constructions appear early in simple forms and then gradually become more complex. Verb inflection appears early as a productive morphological device, and it is followed by suffixation and then noun inflection.

Table 15 gives a summary of the acquisition of grammar by Rabuogi and Akinyi.

Table 15
Acquisition of Syntax and Morphology, Children G and H

<u>Type</u>	<u>Syntax</u>	
	<u>Children</u> <u>G</u>	<u>H</u>
Non-predicative		
N+N	33	33
N+loc	28	--
N+adj.	34	30
N+S'	34	--
Predicative		
V+N	28	29
N+V	28	30
N+V+N	28	28
N+V+loc.	29	--
N+N+V	34	35
V+N+S'	34	--
<u>Morphology</u>		
Noun inflection		
Possession	30	34
Verb inflection		
Subject	28	28
Object	29	30
Tense	29	34
Suffixation		
Demonstratives	28	--

Table 15 (Continued)

<u>Type</u>	<u>Children</u>	
	<u>G</u>	<u>H</u>
<u>Morphology</u>		
Suffixation (continued)		
Adverbial	30	--
Circumfixation		
Adverbial	33	--

Comparison of the results presented in Table 15 with those in Table 8 shows that whereas the simpler forms of predicative and non-predicative sentences were acquired at approximately the same age (19-20 months) by the younger children, the non-predicative sentences appeared later, overall, in Rabuogi's and Akinyi's speech. These differences are probably due, however, to the small size of the samples. Rabuogi did use N+loc. utterances early (28 months); Akinyi used N+adj. early; and it is likely that N+N was present much earlier than the 33 months shown. It is evident, however, that the more complex constructions, as N+N+V (object inversion) appeared later than N+V+N, and of course subordinate sentences appeared late.

In the area of morphology, verb inflection for subject and object marking appeared before noun inflection. A new feature also appeared in the category of verb inflection, that of the past tense marker o-. Suffixed adverbs were in Rabuogi's speech at 30 months, and the use of circumfixation was present at 33 months. For noun inflection, marking

for possession was present, but inflection showing pluralization was still not present at 34-35 months.

CHAPTER 5

GENERATIVE GRAMMAR: 19-35 MONTHS

5.1 INTRODUCTION

In the preceding chapters, all discussion of syntax and morphology has focused on surface structures of the children's sentences. Syntax has been treated only in terms of dominant word order, and morphology has been discussed in terms of inflection of nouns and verbs. In the present chapter, a more formal approach to the analysis of the data will be employed, using a framework of generative linguistic theory.

The plan of the chapter is as follows. First, a brief description of the theory of generative grammar will be given. Second, the criteria for establishing developmental stages in the children's language will be recounted, and then an analysis of the utterances for each stage will be presented. A summary of the pattern of development will follow to conclude the chapter.

5.2 GENERATIVE GRAMMAR THEORY

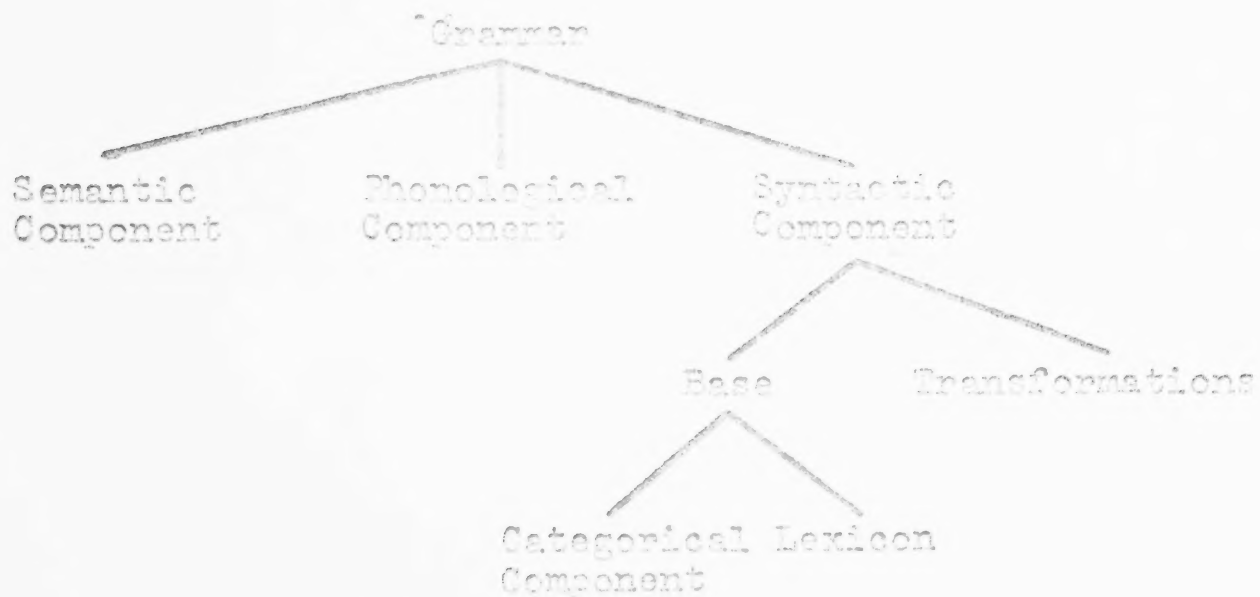
As a preface for a discussion on the nature of early generative grammar for Luo children, it also should be stressed that a generative grammar does not provide an account of how a speaker actually proceeds to construct sentences. Rather, the writing of a generative grammar is an attempt to construct a model which accounts for

what a speaker has to know intuitively about the language. Such a grammar is an abstract, formalized representation of rules or system of rules which a child (or any native speaker) 'uses' to produce sentences.

A sentence, in generative linguistic theory, has two representations, a surface structure and a deep, or underlying, structure. The surface structure is the actual production of a sentence, in physical and acoustic terms. It is the string or linear sequence of units used in speech by receivers and senders. The deep structure represents an intrinsic construction of the sentence, which specifies an abstract account of the meaning of the sentence.

Both representations of a sentence are accounted for by a grammar through the functioning of three interrelated components, the syntactic, semantic, and phonological. The latter two are solely interpretative, in that they "interpret" information provided to them by the syntactic component. The semantic component uses the syntactic information to determine the semantic interpretation of the sentence, and the phonological component uses the syntactic information to determine the phonetic signals. The syntactic component has two components, a base component and a transformational component, and the base, in turn, has two subcomponents -- a categorical subcomponent and a lexicon (Chomsky 1965: 141). Figure I gives a schematic representation.

Figure 1
A schematic representation of the components of a
generative grammar and the syntactic component



Phrase-structure rules, which operate in the base, specify the underlying structure of the sentence, which is mapped into the surface structure by an ordered set of rules, or transformations, through processes of deletion, permutation, and addition of elements. In the categorical subcomponent of the base, the phrase structure rules are an unordered set of context-free rewriting rules. These have the form:

$$x \rightarrow y$$

which is read "x is rewritten as y". The rewriting rules are given in a linear sequence, as illustrated by the following fragment of a set of such rules:

$$S \rightarrow NP + VP$$

$$VP \rightarrow V(NP)$$

$$NP \rightarrow \left\{ \begin{matrix} a \\ the \end{matrix} \right\} N$$

The notational features are: S = sentence; NP = noun phrase; VP = verb phrase; V = verb; and N = noun. Parentheses indicate that enclosed symbols are optional choices in the string; all other symbols are obligatory and must occur. Braces indicate that a choice of elements, mutually exclusive, may occur. The concatenation of elements is indicated by a +, although this symbol is implied when parentheses or braces are used.

A derivation of a sentence results from the successive application of the re-write rules, and it can be represented by a branching tree-diagram, which is specified as the derivation's phrase-marker. Examples of these will be given in the analysis of the Luo data, but it should be noted that a phrase-marker specifies a unique structure which represents only one semantic interpretation, i.e., that of the underlying structure of the sentence.

The syntactic component of a grammar specifies the operation of three kinds of rules, the phrase-structure rules just described, lexical rules, and transformations. Transformational rules, some of which are optional and others obligatory, are applied sequentially to derive the specification for the surface structure of a sentence. Each transformation is defined by a structural description, "S. D.", which gives the base string of elements, and a structural change, "S. C.", which specifies the transform operation on the original string. The lexicon, in the base, specifies the semantic features and syntactic features

of lexical entries and the rules which provide for their substitution as terminal, lexical items in the preterminal string of a sentence derivation. The inherent (semantic) features of a lexical entry indicate such features as e.g. for a 'noun' that the noun is abstract [+abstract] or that it is not animate [-animate]. Contextual (syntactic) features specify the syntactic contexts in which the lexical items can occur in relation to other category symbols. Contextual features for a noun in English would include its occurrence, or nonoccurrences, after the Determiner ("a" or "the"), which is a grammatical formative.

With this brief summary of generative grammar theory, an inspection of the Luo data may now be made.

5.3 DEVELOPMENTAL STAGES

The utterances of the six children in the study have been divided into four developmental stages. Normally in studies on the acquisition of grammar, developmental stages are identified on the basis of the mean utterance length (MUL), measured in terms of morphemes per utterance. Tradition has not been followed here, for two reasons. First, in many instances, an insufficient number of utterances were available for any kind of accurate measurement. For Risper (D), only a few utterances were collected in the 20th month, and almost no other utterances were collected until her 27th month. There is thus no possible means of measuring her speech in developmental terms, such as MUL. The second

reason for not using MUL is that it becomes affected by social factors in the speech of Rabuogi (G) and Akinyi (H), and MUL therefore does not provide an accurate measurement of their speech ability.

In the absence of MUL as a device for identifying stages, the more arbitrary technique of comparing the complexity of surface structure of the utterances has been employed. The utterances of the six children were compared first on a chronological basis and then regrouped according to 'natural' breaks in the order of increasing complexity. For example, all utterances involving the use of embedded constructions were considered to be representative of a more advanced stage than those without embeddings and which appeared at earlier months in the children's speech. The characteristic features of each stage will be discussed more in detail in the analyses of the stages.

5.3.1 Stage 1. Stage 1 includes only a few utterances from Othieno (A2) at 19 months and Aoko (B2) at 20 months (numbers 1-11 in Appendix B). All the utterances in this stage consist of only two morphemes, and the utterances are of two basic types, commands and non-predicative constructions. A fundamental problem is encountered when an attempt is made to write a grammar to encompass these constructions. First, a grammar incorporating predication would allow for constructions which did not appear in the record of child speech. Numerous restrictions on cooccurrence would thus necessarily be written into the

The children included in this stage, their ages, and the utterances are: Aoko, 21-22 months, numbers (12) - (30); Risper, 20-27 months, numbers (31) - (50); Ochieng, 25 months, numbers (51) - (53); Rabuogi, 28 months, numbers (54) - (59); and Akinyi, 28-31 months, numbers (148) - (152).

The structural description to account for the utterances in this stage is:

$$3) S \rightarrow NP \begin{Bmatrix} N \\ VP \end{Bmatrix}$$

$$NP \rightarrow N \begin{pmatrix} Adj \\ Dem \\ Loc \end{pmatrix}$$

$$Dem \rightarrow -ni \text{ "this"}, -no \text{ "that"}, -\check{c}a \text{ "that"}$$

$$VP \rightarrow V \text{ (nom)}$$

$$nom \rightarrow \begin{Bmatrix} N \begin{pmatrix} Adj \\ N \end{pmatrix} \\ Loc \end{Bmatrix}$$

Lexicon Feature Rules:

- i. $N \rightarrow [+N, \pm nom]$
- ii. $[+ nom] \rightarrow [V \text{ \_\_\_}]$
- iii. $[+ N] \rightarrow [\pm Pro]$
- iv. $[+ Pro] \rightarrow [\pm Nom]$
- v. $[+ Nom, + Pro] \rightarrow [\pm Dem]$
- vi. $[+ Dem] \rightarrow -ni, -no, -\check{c}a$
- vii. $[- Dem] \rightarrow -a \text{ "me, my"}, -e \text{ "him, his"},$
 $-gi \text{ "them, their"}$

viii. $[- \text{Nom}, + \text{Pro}] \rightarrow a- \text{"I"}, o-, \text{en } \text{"he, she, it"}, i- \text{"you"}, \emptyset \text{"you (understood)"}$

ix. $V \rightarrow [+ V]$

x. $[+ V] \rightarrow \pm [\text{NP}]$

No attempt was made in the description to account for ellipsis. Utterances such as (41) lweta "hand-my" can be considered as an elliptical form of ma e lweta "this one (is) hand-my", but utterances of this type are counted as simple naming behavior.

Two utterances are not accounted for by the grammar. Number (153) ka otu "here it-has-hole" involves locative inversion, which is not a normal feature of the language, and therefore it is counted as a mistake in (153). Number (160) adwa ŋi nindo "I-want to-go to-sleep" has a more complex verbal construction than other utterances in this stage, and as it is a single example, the child is not attributed with the general ability to use the form. As we will see, the appearance of double verbal construction is a feature of the following stage.

Stage 2 in comparison with Stage 1 shows that the children have acquired the ability to use predicative constructions, with or without the subject present. The verb phrase consists of a single verb with or without a noun phrase. Noun phrases show considerable expansion over those in Stage 1, with adjectives, demonstratives, and nominals all appearing as modifying elements.

In the discussion for Stage 1, the problem of accounting for the absence of marking of agent in imperatives was noted, and the problem was resolved by writing separate structural descriptions for predicative and non-predicative utterances. In Stage 2, this solution was not feasible, or at least was not justifiable, and the method of handling the problem was to account for the phenomenon in the lexicon feature rules. In rule viii., $[- \text{Nom}, + \text{Pro}] \rightarrow a - \text{"I"} \dots i - \text{"you"}, \emptyset \text{"you (understood)"}$, the non-marking of the subject, i.e., $\emptyset$, is counted as a semantic choice of the same order as choice of person and number. In the selection of the proper semantic distinctions for marking of pronouns in the surface structure, the decision of "understood-from-context" could be reached in the same fashion by the child as "first person, singular, etc.". In this fashion, it is not necessary to write a transformational reduction rule, which would make the non-marking of subject a process of the grammar.

5.3.3 Stage 3. Stage 3 is comprised of Rabuogi's speech in months 29-33, numbers (60) - (132), and Akinyi's speech in months 32-35, numbers (163) - (191). The phrase structure grammar for this stage is:

Phrase Structure:

$$4) S \rightarrow NP \begin{Bmatrix} VP \\ \text{Pred. Nom} \end{Bmatrix}$$

$$NP \rightarrow N \begin{pmatrix} S' \\ \text{Adj} \\ \text{Dem} \\ N \end{pmatrix}$$

- vii. $[- \text{Nom}, + \text{Pro}] \rightarrow -a \text{ "me, my"}, -e \text{ "him, his, her..."}, \text{in "you, your"}$
- ix. $[+ \text{N}] \rightarrow \pm [\pm \text{Prep } \_\_]$
- x. $[+ \text{Prep}] \rightarrow e, \text{ "to, in"}, \text{ir "toward"}, \text{loka "up to"}, \text{gi "with"}, \text{ni "for"}$
- xi. $\text{Part} \rightarrow [+ \text{Particle}]$
- xii. $[+ \text{Particle}] \rightarrow o- \text{ "past tense, completed aspect"}, a \text{ "past tense"}$
- xiii. $\text{Aux} \rightarrow [+ \text{Auxiliary}]$
- xiv. $[+ \text{Auxiliary}] \rightarrow \text{we "stop"}, \text{dwa "want"}$
- xv. $V \rightarrow [+ V]$
- xvi. $[+ V] \rightarrow \pm [\_\_ \text{NP}], \pm [\_\_ \text{Prep. p}], \pm [\_\_ \text{Adv}]$

Transformations:

$T_{\text{Placement}}$ S. D.: $X + \underline{a} + Y$ where X and Y are category symbols
 (obligatory) S.C.: $x_1 + x_2 + x_3 \Rightarrow x_2 + x_1 + x_3$

Two utterances in the sample were not accounted for by phrase structure rule 4). Utterance number (175), očamu "it-was-eaten", if it was correctly interpreted, is an example of the passive, completed aspect, but there was some question as to whether the child said očamu or očamo. The latter would be simple past tense. Due to absence of clear evidence that the child was actually using the passive, no allowance was made for it in the phrase structure rule. In utterance (182), siruača mama kano "sweater-my mama keeps", there is object inversion, with "sweater", the object, appearing in initial position. The inversion could be

accounted for with a placement transformation, but as the sample contained only one example of object inversion, the use of a transformation seems unwarranted.

Viewing Stage 3 in relation to Stage 2, definite advances were made in the verb phrase. Not only did verbal particles and auxiliaries appear, but prepositional phrases of a variety of types were present. In addition, the first use of adverbs in predicative sentences were noted. Adverbs of place, such as ka "here" had been used much earlier, but only in non-predicative constructions. All of these new features, particles, auxiliaries, prepositional phrases, and adverbs had the effect of making the verb phrase in Stage 3 much more complex than in Stage 2.

In the noun phrase, there was the new feature of embedded constructions. The form čandə, generally used as a demonstrative, was inflected to give the embedded construction "... you-spoke-of ...", as in (72), gwano ičandə mar baba "chicken you-spoke-of of father".

5.3.4 Stage 4. Only one child was at Stage 4. Rabuogi at 34 months, utterances (133) - (147), used speech that is accounted for by phrase structure rule 5).

Phrase structure:

$$5) S \rightarrow NP \left\{ \begin{array}{l} VP \\ N \\ ma + S' \end{array} \right\}$$

$$NP \rightarrow N \left(\begin{array}{l} Adj \\ Dem \end{array} \right)$$

$$Dem \rightarrow -\check{c}a$$

$$S' \rightarrow N + VP$$

$$VP \rightarrow \begin{pmatrix} \text{Adv} \\ \text{Part} \\ \text{Aux} \end{pmatrix} V \begin{pmatrix} \text{Adv} \\ \text{nom} \\ \text{kaka} + S' \end{pmatrix}$$

$$\text{nom} \rightarrow N \left\{ \begin{pmatrix} (N \text{Adj}) \\ \text{Prep. p.} \end{pmatrix} \right\}$$

$$\text{Prep p.} \rightarrow \text{ni "for"} + N$$

$$S' \rightarrow N + V$$

Lexicon Feature Rules:

- i. $N \rightarrow [+N, \pm \text{nom}]$
- ii. $[+ \text{nom}] \rightarrow [V \text{ —}]$
- iii. $[+N] \rightarrow [\pm \text{Pro}]$
- iv. $[+ \text{Pro}] \rightarrow [\pm \text{Nom}]$
- v. $[+ \text{Nom}, + \text{Pro}] \rightarrow [\pm \text{Dem}]$
- vi. $[+ \text{Dem}] \rightarrow -\check{c}a$
- vii. $[- \text{Dem}] \rightarrow a-, o-, i-, \emptyset$
- viii. $[- \text{Nom}, + \text{Pro}] \rightarrow -a, -e, -i$
- ix. $[+N] \rightarrow \pm [\pm \text{Prep —}]$
- x. $[+ \text{Prep}] \rightarrow \text{ni}$
- xi. $\text{Part} \rightarrow [+ \text{Particle}]$
- xii. $[+ \text{Particle}] \rightarrow o-, \text{da}\eta' \text{ (future conditional)}$
- xiii. $\text{Aux} \rightarrow [+ \text{Auxiliary}]$
- xiv. $[+ \text{Auxiliary}] \rightarrow \text{biro "to come (be going to)"}$
- xv. $V \rightarrow [+V]$
- xvi. $[+V] \rightarrow \pm [\text{— NP}], \pm [\text{— kaka } S'],$
 $\pm [\text{— Adv}], \pm [\pm \text{Adv —}]$

Transformations:

^TObject Inversion (optional) S. D.: X - Y - Z where X, Y and Z are category symbols

$$S. C.: x_1 + x_2 + x_3 \Rightarrow x_3 + x_1 + x_2$$

^TPlacement (obligatory) S.D.: X + dan' + Y

$$S.C.: x_1 + x_2 + x_3 = x_2 + x_1 + x_3$$

The prominent advances made in Stage 5 were an embedding and a subordinate sentence. In the former, the relative pronoun ma "which, who, what" introduced the dependent in the utterance (142) tamtam motimo laka "candy (is) what-did-it-to tooth-my". Number (141), ne kaka omuodo "see how he-chews", gives an example of a subordinate sentence, introduced by the subordinating conjunction kaka "how".

As shown, two transformations are necessary, both being placement transformations. The obligatory placement of the verbal particle dan' "would like" corresponds to the transformation in Stage 3 of the particle a (past tense marker). Optional object inversion was a new feature, although utterance (182) in Stage 3 may have been a precursor for that feature.

5.4 SUMMARY

Viewing the four stages in sequence, the development of the children's grammar may be summarized in the following fashion. From an initial grammar consisting of

simple non-predicative constructions and of commands, the children progress to predicative constructions, with the noun phrase showing the greatest development. In terms of categories, Stage 1 contains nouns, verbs, and locatives; Stage 2 contains adjectives and demonstratives as well. In Stage 3, the noun phrase is further developed to include an embedded construction, but the greatest development is in the verb phrase, where verbal particles, auxiliaries, prepositional phrases, and adverbs all make an appearance. The first transformation, an obligatory placement rule, also appears to be used in this stage. In Stage 4, more embeddings occur, and an optional object inversion transformation appears. In terms of the acquisition of categories, the developmental stages may be represented as in Table 16.

Table 16
Acquisition of Categories in Stages of Development

<u>Category</u>	<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>	<u>Stage 4</u>
N	+	+	+	+
V	+	+	+	+
Loc	+	+	+	+
Adj		+	+	+
Dem		+	+	+
VB part			+	+
Aux			+	+
Prep. p.			+	+
Adv.			+	+
S' (NP)			+	+
S' (VP)				+

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 SUMMARY OF LANGUAGE DEVELOPMENT

6.1.1 Lexicon. Lexical items may begin to appear in Luo children's speech as early as the age of 12 months, although the onset may be at a later age. Universally, the earliest items are the names of significant others in the environment, mama, baba, and the names of caretakers, and a general term, miya for the command "give-me" or "want". 'Yes' and 'no' responses occur early, as much as a month or two before significant vocabulary development.

Babbling behavior may continue for as much as two months after the first appearance of lexical items, but it is terminated before a marked increase is shown in lexical acquisition. Once babbling has ceased and lexical acquisition has begun in earnest, the rate of acquisition is rapid. Not enough information is available to provide vocabulary counts, but two months after lexical items begin to appear, a child has a vocabulary containing animate and inanimate nouns with a variety of sub-classes, personal and demonstrative pronouns, and both transitive and intransitive verbs.

Subsequent development shows first an increase in the number of entries for the sub-categories and further differentiation within the categories. Secondly, and slightly later in terms of chronological age, new categories are

added. The relative order of acquisition appears to be: 1) prepositions; 2) auxiliary verbs; 3) particles and adverbs; and 4) conjunctions. Using as a base the age at which rapid acceleration in vocabulary acquisition begins, the approximate periods required for acquisition of the four categories above are, respectively, 2-3 months, 3-4 months, 4-5 months, and 5-6 months.

6.1.2 Grammar. The earliest productive morphological device for the Luo children was verb inflection for pronominal subject and object. The use of verb inflection was present in the second month following the appearance of two-word utterances. Suffixed demonstratives were present at approximately the same age. Noun inflection for possession made its appearance approximately two months later for one child, but six months later for other children.

Verb inflection to indicate tense appeared later than noun inflection, with a range of one month for one child and four for another. Adverbial suffixation was present only in the speech of one child, as was adverbial circumfixation. The former occurred two months after inflection was first present, and the latter five months after first appearance.

The earliest two-word utterances for Luo children appear in the 19-20 month range. Two types of constructions are present at this stage, non-predicative and imperatives. In the second stage, predicative constructions other than

imperatives are present, and noun phrases show considerable development, with adjectives, demonstratives, and nominals all appearing as modifying elements.

In Stage 3, there is further development of the noun phrase, with nested constructions appearing, but the maximum development is in the verb phrase. Verbal particles, auxiliaries, prepositional phrases, and adverbials all appear in the stage, and an obligatory placement transformation is used. Stage 4 shows the use of another transformation, for optional object inversion. Subordinating sentences in the verb phrase also appear in this stage.

In summary, the acquisition of syntax follows the pattern: 1) initial constructions consisting of a verb phrase or non-predicative elements; 2) predicative constructions with major expansion of the noun phrase; and 3) expansion of the verb phrase. Word order is highly constrained from the outset, with SVO dominant. In Stage 4, an optional transformation may be applied to provide OSV.

6.2 LANGUAGE DEVELOPMENT IN SOCIAL CONTEXT

The above summary of language development ignored, for the purposes of analysis, the social context in which the language was used, the social constraints placed on the language, and the functions for which the language was generated. As was outlined in Chapter 2, the constraints placed on language use, however, has an effect on the collection of data and thus ultimately on the linguistic

competence as measured for an individual performer. It was stressed that the conditions under which the speech was collected from the Luo children was not optimal, and therefore the expressions of competence would be restricted accordingly. An attempt will be made here to provide some concrete evidence of the effect by social factors on the speech of the children and on the expressions of their competence. Some speculations on the nature of the interstices in the record of development will also be provided.

In the initial stages of the research, the children's fear response, both naturally and socially induced, prohibited collection of any data from them directly. All of the children in the present study, except A and B, were in the early one-word utterance stage at this period of the research, and the record is lacking, except for parental reports. Once the children overcame their fear and interacted with us, social restrictions of a different nature came into play. In brief, the children were allowed to interact with us only under controlled conditions, which effectively prevented the systematic collection of spontaneous speech.

6.2.1 Context and Function of Speech. The major restriction on the children's speech by the controlled conditions is that most of their speech in our presence consisted of answers to questions, particularly to "what" and "where" questions. The expectations of the adults as to the linguistic ability of the children, i.e. the adults' cultural

attitudes, then had an effect on the type of speech provided by the children. The early appearance of non-predicative constructions in the speech record is directly attributable to this interplay between the child's capacity and the adults' attitudes. This is not to argue that there is a direct one-to-one correspondence between the acquisition of language by the children and the adults' expectations, but the latter had the effect of channeling the children's speech in the contexts in which the speech was collected. The children were asked to name (what is this?) and to locate (where is ...?), and accordingly, they provided non-predicative, equational sentences (en gwɛno "it chicken" and en ka "she here").

The Luo children's speech, then, was socially controlled in that the design for the functions of their utterances was established by the adults in the interaction setting. A catalogue of the verbal exchanges in the record will not be attempted here, but an account of the children's speech in terms of functions expressed will be given, and a rough correlation with the types of requests made of them by adults will be reported.

All of the children's utterances have been typed according to the function expressed (cf. Appendix B). The criteria for designating function, however, are not readily apparent, and depending on the frame of reference, an utterance may have different functions. An utterance such as (3) ne tantam "see candy" could be taken as an example

of naming behavior, i.e. "see, this is that object which is called candy", but contextual information for utterance (3) specifically indicated that the intent was that of a demand, an order for someone to perform by looking at the candy.

The utterance was therefore classified as a 'demand'.

Specifically, the criteria used for ascribing function were:

1) contextual information, which included such features as preceding utterance(s) and ongoing activity of the actors in the setting; and 2) basic grammatical relations of the classes of words in the utterance. Using these criteria, it was possible to classify all of the utterances into six functions. The classification for each utterance is given in Appendix B, and Table 17 gives the number of utterances in each category according to the four developmental stages. The first number in each column represents the total number of utterances for the particular stage and function, and the second number is the percent for each function of the total number of utterances for the particular stage.

Table 17
Functions of Utterances According
to Developmental Stages

<u>Stage</u>	<u>Locate</u>	<u>Name</u>	<u>Demand</u>	<u>Desire</u>	<u>Describe</u>	<u>Negate</u>
1	2/18%	1/ 9%	7/64%	--	1/ 9%	--
2	10/17%	13/22%	12/20%	7/12%	17/27%	1/2%
3	17/18%	37/40%	12/13%	2/ 2%	26/27%	3/3%
4	1/ 7%	2/13%	4/27%	2/13%	5/33%	1/7%

Inspection of Table 17 shows that developmental trends can be identified, but that an overall progressive development is lacking. For the former, the most striking feature is that the percentage of utterances in the 'negate' category is negligible throughout. Secondly, in Stage 1, the preponderance of utterances, 64%, is in the 'demand' category. Given this feature and the early appearance of the terms miya "give-me" and ne "see", it is likely that the earliest two-word combinations consist of these terms plus objects, perhaps generated by a pivot grammar. The non-predicative, equational N + N (or loc.) constructions then would appear slightly later, as suggested by the information in the table. If this reconstruction is correct, the Luo speech development would parallel that of American children, with the earliest constructions being pivot + open and followed by open + open (cf. Braine 1963), but there would be a kaleidoscoping of the transition period for the Luo children.

In any event, it is evident that the majority of utterances in Stage 1 are unsolicited demands. In Stage 2, however, there is a more even distribution across functions. The utterances for the functions 'locate' and 'name' represent children's responses to "where" and "what" questions, to which they were able to provide brief, non-predicative replies.

The function 'describe' is well marked in Stage 2, and it is shown in the language by the presence of simple

predicative constructions. Many of these utterances are unsolicited descriptions of acts or states, as amoŋo pi "I-drink water", which contrasts with the make-up of the utterances in Stage 3 for the same function. In this stage, many of the utterances represent responses to "doing what" questions, in which the children are asked to describe on-going activities. Another stage in the expectations for the children's behavior is thus exhibited, with the progression being shown in the adults' questions of "where", "what", and "doing what".

In Stage 3, then, the children's speech sample represents unsolicited utterances for the categories 'demand', 'desire', and some in 'locate', 'name', and 'describe'; and the majority of utterances in the latter three categories are responses to questions asked by adults. Of the speech samples available for analysis, a significant portion are thus programmed by the cultural attitudes relating to children's speech capabilities. In Stage 1, there are a few resultant N + N constructions; these are expanded in Stage 2, and again in Stage 3. In Stage 2 simple predicative sentences appear, and in Stage 3, these are expanded in response to "doing what" questions.

6.2.2 Internalized Social Constraints. The social constraints on interaction with children in Luo society discussed so far have all been external to the children's behavioral repertoires. The constraints operated independently of the children's internalization of the rules

regulating the various situations. As the children advance in age and development, they begin to acquire some of the social rules and code the social information in their language and speech behavior. Two children in the study, G and H, provided information on this acquisition process, which we now may consider.

Note was made earlier that the mean utterance length, MUL, was computed for each child, insofar as possible, from the corpus of data. It was further noted that the MUL became affected by social factors as the children progressed in age and development. In order to consider the effects and examine more closely the social factors involved, the MUL results are first given, as shown in Table 18.

Table 18
Mean Utterance Length for G and H, by Month

G				H		
<u>Month</u>	<u>No.</u>	<u>Morph.</u>	<u>MUL</u>	<u>No.</u>	<u>Morph.</u>	<u>MUL</u>
28	7	11	1.57	--	---	---
29	2	5	2.50	--	---	---
30	34	92	2.71	16	21	1.31
31	10	33	3.30	16	17	1.06
32	9	24	2.67	2	6	3.00
33	59	115	1.95	15	23	1.53
34	17	72	4.24	44	64	1.45
35	--	---	---	15	37	2.47

The table shows that, allowing for individual variation between G and H, there is a more or less steady increase in the size of MUL until the 32-33 months age range, at which time the progression is broken. The record is not as clear for H as for G, in that MUL for months 30-32 does not advance regularly, but it is clear that MUL drops from month 33 to month 34 and then rises sharply in month 35. For G, the break in the record is more pronounced, with a drop from 3.30 to 2.67, then to 1.95 at 33 months, and then up to 4.24 at 34 months.

In searching for an explanation for the fluctuations in performance, the most immediate suggestion would seem to be that the data collection situations differed, i.e. that the social settings were different, and were reflected in the children's performances. As we will see, this approach helps to explain the increase in MUL in months 34 and 35, but it does not account for the initial decreases in MUL in months 32 and 33. In order to illustrate more fully, we can turn to the ethnographic record.

The speech samples collected from Rabuogi at 30 months was recorded in a question-answer session with his father, Okumu, Oyugi, and the researcher present. The group was sitting together in front of the home, which was the common pattern for the majority of the visits with all of the children. Rabuogi stood between his father and Okumu, leaning and swinging against Okumu's chair., answering Okumu's questions in turn. As can be seen from Table 11 (p.104),

many of the questions were of the "wh-" variety. At 31 months, the same situation prevailed, except that his mother was present rather than his father.

In the 32nd month, the setting remained constant, but the speech samples contained spontaneous utterances, directed to Oyugi and to Rabuogi's brother. Some of these utterances were simple naming of objects in the environment, which is primarily responsible for the reduction in MUL. More importantly, in the 33rd month, the setting remained constant, with all the researchers present and all the family except the father present also. Rabuogi's behavior, however, was markedly different from that of previous visits. For the first time, he refused to come near us, and he hid behind the house, peering around the edge at us. Okumu interpreted his behavior as due to shyness, saying that he was dirty (he was playing in the dirt as we arrived) and was ashamed for us to see him in that condition.

After some coaxing, Rabuogi was persuaded to come from behind the house. He came and stood by us, and he answered some questions, but he appeared to be shy, averting his eyes, generally toward the ground, and putting his finger in his mouth. Whereas in earlier visits, he exercised a choice in answering or not answering questions, he attempted to provide brief answers to every question in this case. The session terminated when Rabuogi's father returned home. Rabuogi, upon seeing his father arrive, slowly walked away

from us, back to his play. This aspect of his behavior also contrasts strongly with earlier behavior, in which he made a point of standing near the group, and on one occasion, even interrupted the conversation.

Viewing Rabuogi's behavior in perspective, the essential quality seemed to be that he had developed a social consciousness. Whereas earlier, he had not the appropriate standards of social interaction, he had mastered, in the 33rd month, the major features of the standard. He approached the visitors only when requested, did not initiate conversation, observed the proper paralinguistic behavior, and his speech was characterized by brevity and directness. In short, he observed the proper speech etiquette for that social situation, i.e. the etiquette for interacting with visitors. The MUL of 1.95 was a result.

Rabuogi's MUL in the following month, the 34th, was measured at 4.24. In this case, the social setting was different, and his speech was therefore not restricted by the same types of social constraints. In this instance, the actors in the setting were Rabuogi, his mother, and his brother, and the speech was recorded by Oyugi, who remained quietly in the background. Cognizance of Oyugi's presence as an adult did not seem to be a feature in Rabuogi's definition of the situation, and his speech was accordingly freer of constraints. The result was that not only was the MUL more pronounced in Rabuogi's speech, but content and stylistic features were different. For the

former, Rabuogi made evaluative judgments, which were absent in earlier speech. For example, he spoke of his first ride in a motor-car as (137) mitokača koro rača "motor-car-that then bad-me". Stylistically, his speech showed a greater variety in volume, tone, and pitch.

Akinyi's case parallels Rabuogi's, except that the acquisition of a social consciousness was not as positively shown in her behavior. The social settings were the same as in Rabuogi's case, with the family and researchers present. In Akinyi's 34th month, the standards of appropriate behavior were present insofar as the nature of contact was concerned, but stylistic features did not seem to be present. Akinyi did not approach us unless requested, she did not initiate speech, and she gave direct answers, but she failed to observe the proper paralinguistic features of behavior as direction, personal space, etc. The possession of a social awareness or consciousness was not as clearly evident as it had been for Rabuogi.

In the following month, Akinyi's 35th, it was possible for Oyugi to collect speech samples in a situation directly comparable to that with Rabuogi in his 34th month. Oyugi remained in the background while Akinyi interacted freely with her older sisters. The results were increased MUL, initiated conversations, and marked stylistic variation.

6.3 CONCLUSIONS

The general goal of the study was: 1) to provide a description of the acquisition of language in terms of categories acquired, by Luo children in the age range of 12-35 months; 2) to account for their linguistic competence in the generation of their language; and 3) to illustrate how social settings alter the linguistic performances of the children. The following chapter by chapter account provides an overview of the conclusions reached in the pursuit of the goals.

In Chapter 2, methodological problems were discussed, so as to specify the conditions encapsulating the data gathering process. Ecological factors, such as mode of subsistence and land organization, and social factors, such as patterns of interaction, hierarchical relationships, and daily routines, all affected the types of interaction permissible for the children and investigators. In short, the rules regulating the children's behavior were: 1) do not interact with strangers; 2) interact only ritually with visitors; 3) interact with adults according to the contingencies of the situation, e.g. formally in the presence of other adults; and 4) interact with minimum constraints with peer groups.

The factors controlling the data collection process allowed access to only particular kinds of speech data, since the performances by children were regulated by the same factors. Expressions of the children's competence

were thus subject to the qualification that restrictions on performance had the effects of 1) providing only limited, partial accounts of competence, and 2) overestimating the ages at which various linguistic categories entered into the children's competence.

In Chapter 3, the speech data for children A, B, A2, B2, C and D were presented, and summaries were provided for lexical, morphological, and syntactic development for the age range of 12-27 months. The speech data of children G and H were presented in Chapter 4, and further development in language was recorded, with the age range of 28-35 months represented. The major findings for the two chapters were: 1) lexical items began to appear at 12-14 months; the earliest items were nouns, pronouns, and verbs; and later categories to appear were prepositions, auxiliaries, particles, adverbs, and conjunctions; 2) verb inflection for pronominal subject and object appeared at 20-21 months, and noun inflection for possession appeared later at 27 months; and 3) the earliest syntactical constructions began at 19-20 months and were imperatives (V + O) and non-predicative sentences (N + N); predicative sentences followed, with development of the noun phrase first and the verb phrase second.

In Chapter 5, a generative grammar was provided for the age range of 19-35 months in order to account for the linguistic competence in the children's generation of their grammar. Four stages of development were recognized. Characteristics of each were: 1) non-predicative constructions

and verb phrases; 2) predicative constructions (NP + VP) with expanded noun phrase; 3) expanded verb phrase and an obligatory placement transformation; and 4) an optional placement transformation.

In Chapter 6, a summary of the language development of the children has been provided, and information on the social constraints as they effected the measurements of competence has been discussed. Specifically, the cultural expectations of the adults, as expressed through the questions asked of children, conditioned the responses of the children. The functions of the children's speech were therefore channeled to a degree by the cultural attitudes of adults and expressions of competence were consequently affected.

Internalized social constraints began to appear in the 32nd and 33rd months age range of the children, and they, again, regulated the flow of speech available for analysis. Specifically, the constraints limited the speech both in terms of mean length of utterances and stylistically. The imposition of the constraints were situation specific, clearly indicating that the children were able to manipulate the variables of the speech setting.

In conclusion, descriptions of the linguistic competence of children in acquisition studies, which must be empirical, should consider both the larger social environment of the speech community and the conditions which restrict, permit, and generally regulate the data collection process.

Accounts of the children's competence can then be placed in a context which illustrates the nature of the limited descriptive adequacy. An attempt has been made here to present an analysis of the acquisition of language by Luo children in such a framework.

6.4 ADDITIONAL REMARKS

The major approach of the present account of language acquisition has been to treat as the basic unit of concern the social setting in which the language was generated and collected. Emphasis was placed on the regulatory features of the environment which defined and delimited the speech information available for analysis.

Within this framework, a description was provided of the children's language, both in terms of the acquisition of grammatical categories and relations. The account was primarily descriptive, in an attempt to identify what actually was acquired and when acquisition occurred, both in chronological and relative order. Due to the logically prior questions of "what" and "when" of language acquisition, no attempt was made, except within the broader social framework, to deal with the questions of "how" and "why" the language was acquired. Discussions of the input language, comprehension, cognitive development, and the ability to handle semantic relationships, as well as other features such as synthetic versus analytic modes of representation as strategies of the children all have been reserved for

future research.

Scant attention has been paid also to cross-cultural comparisons in the acquisition of language, as this is envisioned to be the second stage of the general study on the acquisition of communicative competence. Some of the general findings of the research with the Luo may be mentioned in relation to results of other studies.

First, studies on language acquisition have shown that individual differences are present in the acquisition process (cf. Slobin 1968:7-8). These differences are generally ones of strategy, through which children rely on different grammatical techniques or processes to convey the intended meaning of their utterances. The Luo data is not sufficient to identify marked individual variation of this type, but one striking phenomenon is that the age of onset of the use of grammar shows a high degree of variation. In all other studies, grammar has become productive in the age range of 18-24 months, but two children in the Luo sample, G and H, did not begin to use two-word utterances until the 27th month and possibly the 28th.

Most studies on child language have shown relatively clearly identifiable one-word and two-word stages. The Luo data corroborate this finding, even though Luo is a morphologically productive language. Although it may seem intuitively obvious that one and two-word stages would appear in children's speech, there are no firm a priori grounds for making such an assumption. Burling, for example,

found in the study of Garo (a language of the Bodo group of Tibeto-Burman) that it was not possible to speak of a two-morpheme or two-word stage in the acquisition of language (1959:65).

The earliest stage of two-word utterances is generally characterized by pivot constructions, for almost all children for whom there is sufficient data. The Luo data indicate that the earliest stage of the children's grammar may have been a pivot grammar, but the evidence is not conclusive. It does appear to be the case, however, that syntax precedes morphology as a productive device in the speech of the Luo children, a feature that occurs in other languages (except Garo), regardless of the morphological productivity of the input language (cf. Slobin 1968:19).

Almost all studies of child language have noted that inflections emerge suddenly, generally a few months after the beginning of two-word sentences. The emergence of inflections in Luo does not seem to be sudden, but they do appear after the beginning of the two-word sentences.

Slobin reports that Soviet psycholinguists "...interpret the order of emergence of inflectional classes in terms of the relative semantic or conceptual difficulty of various classification criteria for children. One line of evidence in this argument is the observation that lexical items referring to certain semantic categories appear at the same time as those categories become morphologically marked in child's speech" (1968:33). Such an

analysis could be applied fruitfully to the Luo data and could serve as a convenient means not only for cross-cultural comparison of the order of emergence of morphological classes, but as a means of relating the emergence of semantic distinctions to the environmental and cultural conditions particular to individual languages.

NOTES

CHAPTER 1

1. The abundance of prefixes in African languages denoting such concepts as singular-plural, people-of, language-of, etc. has led often to individual tribal groups being referred to in the literature by a multiplicity of terms. One solution to this problem is to use the root term to refer to the group, ignoring prefixes. This approach has been employed here, and all reference will be to the Luo and Luo language, rather than to the more technically correct Joluo (people-of-luo) and ɔoluo (language-of-luo).
2. Siaya and Kisumu Districts were created in 1967 by a division of the former Central Nyanza District. South Nyanza District became Homa Bay District in 1968.
3. According to Greenberg's classification, the Luo language is a member of the Western Nilotic languages, which is a branch of the Eastern Sudanic group. This Eastern Sudanic grouping belongs to the wider Chari-Nile family (Greenberg 1963).
4. The Mission, located in the center of the Ulanda clan, operated a nursery school in addition to an elementary school and a medical dispensary. In 1968, an Harambee

Girls Secondary School was constructed.

CHAPTER 2

1. Investigators working with English-speaking American children have stressed the necessity of longer visits. The amount of the children's verbal output varied greatly over a period of hours, and in order to obtain a representative sample of their speech, it was necessary for a visit to cover the greater portion of a day (cf. Bloom 1968: 29). As will be seen, visits covering several hours were not feasible for the present investigation, due to the Luo etiquette for receiving visitors. Furthermore, the restriction that visits must be several hours in length may well hold for American children, but it need not for other societies, in which rules governing the use of speech for children may be very different. A basic assumption for the desirability of longer visits is that familiarity with the child will be increased and therefore speech will be more spontaneous, but this assumes a priori that the social position of the receiver becomes defined as "one to whom it is appropriate to send messages", and this need not be the case.

CHAPTER 3

1. The usual method for defining the stages is on the basis of mean utterance length (MUL) (cf. Brown and Fraser 1964). Sufficient information is not available to

determine the stages accurately for the Luo children, due to the difficulty of collecting one-word utterances in particular. The information for the babbling stage is more complete, as is that for the two-word stage. The one-word stage is then defined in part by fiat, as that stage intermediate to babbling and two-word utterances.

2. The language belief questionnaire used for Luo informants was a shortened version of the one given in the Field Manual (1967:50-55). There was some redundancy in the original version, and in addition, it was too lengthy to be administered to an individual informant in one session.

3. The utterances of morpheme length greater than one are numbered consecutively throughout the text, so as to facilitate analyses. A listing of all the numbered utterances is given in Appendix B.

4. Frequently the children's words were reduced or simplified versions of the adult terms. Where this is the case, the adult term is given phonemically, following the child's utterance.

5. Utterances that are at variance with correct adult forms are noted and discussed in the text. Unless an utterance is discussed in this way, it may be assumed that

it corresponds to adult standards.

6. The form čam in Luo has as referents both "food" and "to eat (intransitive)". The referent "food" has been selected as the gloss for the term in the Luo children's speech, so that miya čam, for example, is "give-me food" rather than "give-me I-eat". The latter, as noted on page 58, would require a verbal inflection to give ačam.

7. At first glance, this conclusion seems to be in contradiction with the discussion in Chapter 2 (pp. 39-42), in which the self-sufficiency of the Luo children was stressed. However, the fact that many activities are segregated on a child-adult basis is balanced by the fact that integration is also strictly observed for some activities (as e.g. at meal-time). The Luo homesteads are not large spatially, and much of the family interaction occurs in the courtyard area in the center of the compound, i.e. in a restricted space. The social mechanism for allocating rights, duties, and obligations in behavior probably functions in such a way as to regulate the amount of interaction and thereby control generation of such emotions as hostility. In any event, there is no lack of opportunity for father-child contact.

8. Only selected portions of the conversation are given in Table 3, a pattern that will be followed in subsequent

tables. The format used is that the child's speech appears in the right-hand column, and the adult's in the left. In standard format procedure, the order is reversed, but the nature of the conversations for the Luo interlocutors favors the present system. Rarely does the Luo child initiate the conversation (in the samples), but rather most of his utterances are answers to questions, and the left-right (question-answer) sequence seems more appropriate. Pauses in conversation are not marked in the tables, nor are markers included for changes in topic. Comments necessary for providing contextual information to allow for semantic interpretation are given. All of the recorded conversations were in the setting of the child's home.

9. The distinction between morphemes and words is employed in the present discussion, glossing over the theoretical issues involved in making such a distinction. The rationale for the use of the distinction is that it heuristically affords a convenient basis for consideration of the morphological processes of inflection, prefixation, and suffixation on the one hand, and of syntactic ordering of words on the other. In Chapter 5, the distinction will be ignored in the process of assigning structural descriptions to sentences.

10. There seems to be pronounced individual variation on this point. Some Luo always employed the particle e in the environment ma _____. Others used it selectively as an emphatic, in the sense of the definite article, and still others used it sparingly, if at all.

11. As inspection of Table 7 shows, there are gaps in the record. No use of personal names, for example, were recorded for child C, or child D until the 27th month. These omissions are most likely a function of an inadequate record, but patterns of acquisition are discernible for the Table. Terms for wild animals do not appear until after the age of two years; names of parts of the body are acquired at post-21 months; and a number of transitive and intransitive verbs have been acquired by the 21st month.

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APPENDIX A

AN OUTLINE OF LUO GRAMMAR

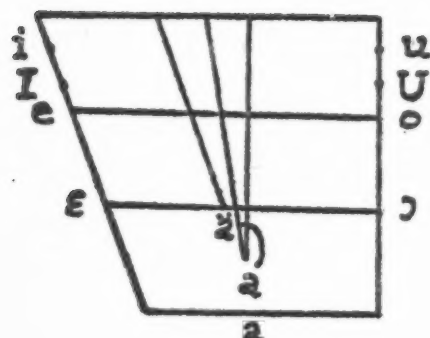
This outline is based mainly on the material presented in three works on Luo grammar: Edgar Gregersen, Luo: A Grammar (1961); R. L. Stafford, An Elementary Luo Grammar: With Vocabularies (1967); and A. N. Tucker and M. A. Bryan, Linguistic Analyses: The Non-Bantu Languages of North-Eastern Africa (1966). The latter, as a survey work, summarizes primarily the major phonological and morphological categories of Luo. In Gregersen's work, phonology and morphology are extensively analyzed, and syntax is treated in an Immediate-Constituent framework. Stafford's work, though non-technical, is extensive in scope and has been used here to supplement the other two references. Overall, an attempt has been made in the outline to summarize the major features of the Luo language in order to present a brief sketch of the relevant morphological and syntactic devices. The qualification must be made, however, that such a sketch cannot give an even moderately adequate phrase structure statement, much less a generative grammar.

I. Phonology: the major features are:

A. Vowels: Tucker and Bryan give a simple dichotomy of five 'hard' vowels against five 'hollow' vowels, in which the categories are distinguished by both tongue position and voice quality (404).

Close (Hollow)	Open (Hard)
----------------	-------------

i	I
e	ε
ä	a
o	o
u	U



E. Consonants: Gregersen gives the consonant phonemes as: /p θ t ʃ k; b ð d ʒ g; m n ɲ ŋ; f s h/ (27). In chart form the consonants are as follows (29):

	labial	dental	alveolar	palatal	velar
stop fortis	p	θ	t	č'	k
stop lenis	b	ð	d	ʝ	g
nasal	m		n	ɲ	ŋ
spirant	f		s		h
liquid			l,r		
semi-vowel				y	w

In addition to the 21 consonants in traditional Luo, there are three of foreign origin --š v and z. In accordance with the traditional orthography for African languages, the palatal nasal /ɲ/ will be given as /ny/, and in addition, the labial spirant will be written as /ɸ/ rather than as /f/.

Final consonant change is a grammatical feature in Luo. The change is used in formation of the possessive, before some demonstratives, in the plurals of nouns, and in derivative verbs. The changes are (Tucker and Bryan 407):

č > y	<u>wíč</u> "head"	<u>wíyà</u> "head-my"
r > č	<u>okúro</u> "thorn"	<u>okúč</u> <u>yaθ</u> "thorn-of tree"
k > g	<u>gùòk</u> "dog"	<u>gùógnĭ</u> "dog-this"
m > mb	<u>kóm</u> "chair"	<u>kòmbè</u> "chair-his/ chairs"
l > nd	<u>búl</u> "drum"	<u>bùndè</u> "drum-his/ drums"

C. Allophony: there is considerable free variation phonetically between [ɸ] and [h], [θ] and [t], and [ð] and [d].

D. Morphophonemics, Canon, and Suprasegmentals:

1. Alternations:

a. automatic alternation: polysyllabic morphemes with prepausal allomorphs in unstressed -V have allomorphs without the -V before an allomorph with a vowel (Gregersen 33);

e. g. pal(à) òdik "knife dull"

b. narrow static alternation: morphemes with root vowels (vowels of stressed syllables essentially) that are open take open clitic vowels (vowels of unstressed syllables). Similarly, closed root vowels take closed clitic vowels (34-35);

e. g. (1) within a word

lɪɛ̃ "elephant"

lɪɛ̃ "elephants"

(2) of clitics

ɔ̃ ~ o "he, she, it"

ɛ̃ ~ e "him, her, it"

c. miscellaneous alternations: a group of monosyllabic words of the form CV has allomorphs without the vowel before an allomorph beginning with a vowel (36):

e.g. dà > d(a)inənə "if you see him"

2. Canon: the simplest and most common form of word is CVCV, the final vowel being fully articulated. CV and CVV are also common (Tucker and Bryan 409).

3. Suprasegmentals:

a. stress: falls regularly on the penultimate syllable with secondary stress on geminate vowels (Gegersen 40).

b. tone:

(1) high tone does not occur in an unaccented syllable except after midtone.

(2) stressed ultimate syllables contain only low tone.

(3) complex tones occur only in a stressed penultimate syllable (41).

4. Reduplication: there are two types of reduplication which are important devices in Luo.

- a. major reduplication: a considerable number of nouns have disyllabic stems reduplicated in full (114);
- (1) without prefix:
- pilùpflu "pepper"
- sUrèsUre "small-pox"
- (2) with prefix:
- kábondòbondò "blister"
- nyàlìnlìn "dragonfly"
- b. minor reduplication: several items with monosyllabic stems show reduplication (114);
- e.g. máma; bába; dede "locust"

II. Morphology: Luo has three major word classes: two inflected (nominals and verbs), one uninflected (particles) (Gregersen 53-54).

A. Nominals: they share the general and regular feature of a singular-plural inflection, and syntactically, they have the prime function of being the subjects and objects of predication (53).

1. Dependent nominals: there are two classes:

a. conjunctive (affixed) pronouns: characterized by a dimension of person as well as number. As

subjects of predicate verbs, they appear as (53):

1st P. 2nd P. 3rd P.

s. a-"I" I-"you" o-,e-"he,she,it"

p. wa-"we" U-"you" gI-"they"

- b. demonstratives: usually follow another nominal or nominal phrase (54); e.g. ni "this"; tàmtàmbni "candy-this"

2. Independent nominals: using the criteria of case inflection for the remaining nominals, there are two large divisions:

- a. group I: all nominals without an appertentive (genitive) case feature:

(1) disjunctive pronouns (same as conjunctive pronouns [above] except for double vowel length and final consonant -n).

(2) interrogatives: never occur as the direct subject of a predication, only as the antecedent of a relative ma- clause. Listed as (Gregersen 54):

<u>ṇà</u>	"who"	<u>àṇò</u>	"what"
<u>ṇàwà</u>		<u>àṇowà</u>	
<u>ṇàgìṇì</u>	"who (pl)"	<u>àṇogìṇì</u>	"what (pl)"

(3) quantitatives: e.g. dùtò "all",
mòrò "some"

b. group II: all nominals with appertentive inflection.

(1) numerals

(2) nouns: those nominals that can occur in the appertentive before conjunctive pronouns (55).

3. Plural: stem plus suffix. There are four plural suffixes (86);

a. a consonant (either /k/ or /n/)

b. zero

c. the syllable -nI

d. a vowel (either -i, -o, or -ε) (also cf. pg. for morphophonemic alternation rules). The plural suffix -ε is the most productive of the plural suffixes.

4. Appertentive (genitive): appertentive inflection follows closely the pattern for plural suffixation;

[illegible]

(cf. Gregersen 88-93 for a more complete discussion).

5. Composition and Derivation: the most productive method of noun formation is the use of prefix plus stem.

a. prefixes: there are eight prefixes (106):

(1), (2): a- and o- are used as sex markers, especially for proper names;

e.g. Očien (male) Ačien (female)

a- frequently denotes an agent;

e.g. àjuògà "physician, diviner"
(juòk "witchcraft")

Both a- and o- are constituents of a large number of nouns denoting plants and animals;

e.g. apùòyo "rabbit"
ondíek "hyena"

(3) kà- has two distinct meanings; agent and place;

e.g. kàdalà "country person"
(dalà "home")

kàdèm "Kadem (a district in Homa Bay District)

(4) kalà- has the general meaning of
"large size";

e.g. kalàbugò "big fly"

(5) kì-: stem is usually a verb
derivative;

e.g. kìdènyà "period of famine"

(dènyò "to be hungry")

(6) mà- is rarely used; stem is always
a noun derivative.

(7) mì-: stem is a verb derivative;

e.g. mìgàngà "thief"

(gàngò "to steal")

(8) sì-: occurs rarely; stem is
usually a verb derivative;

e.g. sìgàrà "story" (gàrà "to tell")

b. suffixes: most important is -rUòk

(113);

e.g. rìnrUòk "body" (rìnrò "meat")

parrUòk "thought" (parò "to think")

c. reduplication: discussed on page

d. compound nouns: two kinds: (1) those
where the first element varies in the
plural; and (2) those with invariant
nonfinal elements (116):

(1) three prefixes in 'double-plural' nouns:

- (a) nyà- carries meaning of "young", "offspring", "diminutive";

e.g. nyagùòk "puppy"

(gùòk "dog")

nyigùògi "puppies"

- (b) rà- means "infirm agent" and also "instrument";

e.g. ràbàm "cripple"

(bàm "thigh")

ràgUàr "rake"

(gUàro "to scratch")

- (c) jà- has general meaning of agent;

e.g. jàpùr "farmer"

(purò "to dig, hoe")

jàpuònǎ "teacher"

(puònǎo "to teach")

e. derivation: the only significant kind of derivation in Luo is that of nouns from verb forms. Nouns may be derived from non-o and -o verb forms (120):

e.g. gero "cruelty" (gèr "to be cruel")

rač "evil" (ràč "to be evil")

tič "work" (tiyò "to work")

čam "food" (čamò "to eat")

- B. Pronominals: the conjunctive and disjunctive pronouns are given on page . As subject of a predicate sentence, the conjunctive pronouns are prefixed to the verb stem. To show possession, the pronouns are suffixed to the noun which is possessed, and they are suffixed to verb stems to show nominal objects.

e.g. wàđiyo "we-go"

odwà "house-our"

kony(o)wà "help-us"

- C. Verbs: verb morphology has essentially two parts: (1) segmented structure, and (2) aspectual tone contour in pronoun-verb constructions (138).

1. segmental structure: there are three classes of verbs, based on the type of suffix used in citation form:

- a. -nĩ suffix: the majority of verbs in this category denote states of nervous behavior, tingling noise, shiny appearance, etc. All are intransitive, and the total number of verbs

in the category is small (138).

Verbs in -ni invariably have monosyllabic stems of the general form C_1VC_2 (C_1 - any single consonant; C_2 - any single consonant or nasal-stop cluster) (140);

e.g. kirni "to shake with fear or cold"

lanni "to be shiny, bright"

pični "to sparkle"

- b. zero suffix: all the verbs are intransitive, and frequently stative (138).

- There are two major subdivisions: (1) those with reduplicated stems, and (2) those without (141):

- (1) the stem is monosyllabic, of the form C_1VC_2 (C_2 is a nasal, voiceless-voiceless stop, or liquid) (141);

e.g. berber "not to be beautiful"

(ber "to be beautiful")

kečkeč "to be somewhat bitter"

(keč "to be bitter")

- (2) the majority of the verbs have final C (142);

e.g. bòr "to be tall"

duòn "to be old, large"

c. -o suffix: all transitive verbs belong to this class, and some intransitive-qualitative verbs. This class is the most productive (138). Verbs with -o suffix have non-reduplicated stems (142).

2. Transitive-intransitive derivation: a number of verbs are groupable into pairs such that they constitute transitive and intransitive alternants of the same verb stem. Three techniques are involved (143):

a. use of the intransitive affix -n-, followed by an -o suffix;

e.g. pugbò "to fatten"

pugnò "to be fat"

b. change of verb suffix, -o > -ø.

Stems ending in a stop or the cluster /ng/ show regular consonant alternation (144):

	Trans.	Intrans.
d>t	<u>kedò</u>	<u>kèt</u>
	"to scarify"	"to have cicatrices"
y>č	<u>neyò</u>	<u>nèč</u>
	"to know"	"to know"
y>ø	<u>ueyò</u>	<u>nuè</u>
	"to smell"	"to smell"

g>k	<u>ngò</u>	<u>ngòk</u>
	"to vomit"	"to vomit"
ng>ŋ	<u>čungò</u>	<u>čùn</u>
	"to stop"	"to stop"
ɔ>uo	<u>dɔngò</u>	<u>duòn</u>
	"to make grow"	"to be big"

- c. change within the -o class. Morphologically transitive-applicative verbs generally have 'open' vowels and voiced-lenis consonants; intransitive-qualitative ones, 'closed' vowels, voiceless-fortis consonants (144);

	Trans.	Intrans.
a>e	<u>barò</u>	<u>berò</u>
	"to split"	"to split"
a>ie	<u>čàmò</u>	<u>číémò</u>
	"to eat"	"to eat"
ɛ>e	<u>nɛnò</u>	<u>nènò</u>
	"to see"	"to see"
ɔ>o	<u>gɔyò</u>	<u>gočò</u>
	"to beat"	"to beat"
ò>θ	<u>màòò</u>	<u>mèθò</u>
	"to drink"	"to drink"
y>č	<u>kayò</u>	<u>kečò</u>
	"to bite"	"to bite"

3. Aspectual contours: a nondefective verb has five contours, shown below (145-46);
- infinitive (same as citation form, $\bar{v}$, $\dot{v}$)
 - durative-inceptive $'\dot{v} \bar{v}\dot{v}, \dot{v}$ (or $\dot{v}, \dot{v}$)
 - perfective-present $\dot{v} 'v\bar{v}, \dot{v}$
 - imperative $\bar{v}, \bar{v}$
 - subjunctive $\bar{v} 'v\bar{v}, \bar{v}$
- (v = syllable; $'$ = low(-fall) tone; $-$ = mid tone; $'$ = high(-rise) tone; the first column represents the subject pronoun, and the second, the verb proper).

D. Particles

1. Prepositions: occur only in construction with a nominal or nominal phrase. The major prepositions are (56-57):

<u>e</u> "in, on, to, at"	<u>kod</u> "with"
<u>gI</u> "with, during"	<u>kuðm</u> "from, among"
<u>ir</u> "toward"	<u>nI</u> "for"
<u>mar</u> "of"	

2. Particle derivation: there are two major techniques for particle derivation: reduplication and affixation using the circumfix a...a (157):

- a. the stem of particles showing reduplication is variously a verb or particle derivative;

e.g. linlin "quietly" (lin "to be quiet")
piyopiyo "quickly" (piyo "to be quick")

- b. the circumfix a...a has two uses:

- (1) one use is associated with a stem derived only from verbs. The general meaning is "in the manner (implied by the verbal stem)" (158):

e.g. ahinya "very" (hinyo "to be many")

- (2) the second use is associated with noun, disjunctive pronoun, as well as verb-derived stems. The general meaning is "just...", "simply...", "keep on doing...";

e.g. sabun abuna "just soap"

(sabun "soap")

ayweyo ayweya "I-rest just"

(yweyo "to rest")

3. Verbal particles: they are the tense and aspect auxiliaries for the Luo verb. The major particles are:

- a. a denotes the immediate past, i.e.
"just completed", "very recently";
e.g. a abíro "I just came"
- b. nende (usually in the concatenated form ne): denotes the past, but with the restriction "in the past twenty-four hours":
e.g. nénde oðíyo "he went earlier today"
- c. nyo(ro): denotes the past --yesterday;
nyó wabíro ka "yesterday we came here"
- d. nyoča: denotes the past --day-before-yesterday.
- e. yande: denotes the past -- recently, formerly;
e.g. yánde wagédo dero "recently we built a granary"
- f. nene (usually ne): denotes relatively remote past;
e.g. né Otieno ðíyo Kisumu "Otieno was going to Kisumu (some time ago)."
- g. čon: denotes remote past;
e.g. čon jalúo obíro e Nyanza "long ago the Luo came to Nyanza"

- h. an: denotes the immediate future;
e.g. án owùòk "soon he will leave"
- i. kiny: denotes the future -- tomorrow;
e.g. kiny walimógi "tomorrow we will visit them"
- j. n(o): denotes the future: (1) prefixed to the subjunctive form of the verb (i.e. final -o > $\emptyset$); or (2) infixes to the verb stem, with vowel assimilation;
e.g. (1) nakél rabólo "I will bring bananas"
(2) anákel rabólo "I will bring bananas"
iníkel... "you will bring.."
- k. tinde/tinende: denotes the present -- today, nowadays, these days;
e.g. tinde koθ nyálo ɕwe "today it may rain"
- l. -se-: denotes the Perfect "has/have";
wasèpáko rùðθ "we-have-praised the chief"
Otieno nosēmóko taya "Otieno had-lit the lamp" (n(e)o-se-moko).
- m. pok: denotes negative Perfect -- have not yet;
e.g. pòk olóso ɕlèmo

"she has not yet prepared the
food"

- n. da: denotes conditional present;
e.g. ka dá kíkómbe obarórs, dá očuer
"if the cup were cracked, it
would leak"

- o. di: denotes conditional past;
e.g. di né ačóp siro, di né anlswó
aloθ "if I had reached the
market, I would have bought
vegetables"

4. Other particles:

- a. preverbal nonsubordinating particles:

- (1) ká "when, if"
- (2) káká "when, as"
- (3) kátá "whether"

- b. negative particles:

- (1) ok/øk "no, not"
- (2) kik/kík "don't"
- (3) pok "not yet"

- c. relative particle ma "who, which":

introduces relative phrases and is
used with adjectives and adverbs;

e.g. nat máθo "a dying man"

nyUka mimačo "porridge which
you are drinking" (m(a)-i-)
nato má čiémbe očlěk "man whose
food is cooked"

- d. plural particle -uru: occurs only in
an imperative or exhortatory verb;

e.g. wačnàuru "you(pl) tell me"

(wač = tell; n(i)a = to me;

uru = you)

wačlùru! "let's go!"

- e. the particle -(n)ga: means "habitually",
"regularly";

e.g. en è móywěčóga larU "he is the
one who usually sweeps the
compound" (ywečo "to sweep",
-ga "usually")

- f. the reflexive particle -re: occurs
immediately after the verb and before
pronoun objects (Gregersen 73-74);

e.g. àhérora "I-love-myself"

wàhérora "we-love-ourselves"

E. Adjectives: are postposed to nouns, and except
for quantifiers and where used as a predicate,

they are introduced by the relative particle ma. Only a few, but very common, adjectives show pluralization;

e.g. ber "good" beyo (pl)

rač "bad" ričo

duon "big" dono

1. Predicate adjective: may stand alone, or be preceded by a noun or pronoun;

e.g. tek! "it is difficult"

ober "he is good"

tin pek "burden is heavy"

2. Quantifiers: follow the noun;

e.g. dwesini arlyo "cows two"

žok duto "cattle all"

3. Interrogative adjectives: there are three;

mane "which" (mage, pl.)

manade "what kind of"

adi "how many"

4. Demonstrative adjectives: there are three main types, and they are suffixed to the nouns that they qualify (Stafford 1967:32):

a. proximate: -ni "this", -gi "these"

-no "that", -go "those" (used when the object is within reach of the

of the person spoken to).

- b. distant: -ča "that", -ka "those"
(used when the object is out of reach but in sight).
- c. reference: -ɔno "that referred to",
-ɔgo (pl); -nogo "that very", -gogo
(pl).

5. Articles: there are no definite or indefinite articles in Luo. For emphasis, the demonstrative adjectives may be used, as well as other forms;

- a. the particle e:

(1) may stand alone;

e.g. okélo mà é "he-brought this one"

(2) be prefixed to a reduplication of a demonstrative adjective;

e.g. (from Stafford 33)

komni eri "chair-this one"

komno ero "chair-that one"

komča sča "chair-that one"

kombegi eki "chairs-these ones"

etc.

- b. the quantifier moro;

e.g. nat moro "man certain"

c. the demonstrative of reference

čande "that spoken or referred to":

e.g. nat čande biro "man referred to
is coming"

F. Adverbs: may be unanalyzable morphemes or
may be derived from verb stems.

1. Derived: the circumfix a...a is used
with the verb stem;

e.g. pando "to hide"; apanda "secretly"

čUno "to force"; ačuna "forcefully"

2. Some of the adverbs of time have been
given as verbal particles. Others,
adverbs of place, and interrogative
adverbs are given below:

a. adverbs of time:

podī "still, not yet"

nyaka "till, until"

nyaka a "since"

baŋ "after"

b. adverbs of place

ka, ku "here"

kanyo "there (exact spot)"

kuno, kuro "there (locality)"

malo "higher up, above"

mwalo "lower, down below"

- c. interrogative adverbs (except for
marano, terminal position in the
 sentence is obligatory);
kanye?, kure? "where?"
marano? "why?"
nano? "why?"
karano? "when?"
nade, nadi? "how?"

G. Conjunctions: there are coordinating and sub-
 ordinating conjunctions:

1. Coordinating:

- a. kendo "and; again";
 e.g. Auma olóso člěmo, kendo
gičlěmo "Auma prepared food
 and they ate"
- b. to "but; and";
 e.g. in žamòkò, to wa žòčándè
 "you richman, but we poor-men"

2. Subordinating:

- a. nikeč "because";
 e.g. nyaθi ywàk nikéč olal
 "child cries because she is lost"
- b. mondo "in order to";
 e.g. obíro e siro móndo rěwo gweno
 "he-came to market in order to
 sell chicken"

- c. Kátá "even if; whether; or" ;
idwáro rabolo kátá rabuon?
 "you-want banana or potato?"
- d. ká "if; like; when; unless";
 e.g. ká Opiyo čópo, wamóse
 "when Opiyo arrives, we (will)
 greet him"
- e. káká "as; how";
 e.g. ne káká omuódo njúgu
 "see how he-eats ground-nuts"

III. Syntax: the word order in Luo is SVO, and despite a productive morphology, the word order is highly constrained. Using as a criterion the type of class(es) in the predicate, two major sentence types may be identified: (1) equational sentences -- with nominal predicate; and (2) narrative sentences -- with verbal predicate.

A. Equational sentences: have the basic form;

$$S \rightarrow NP \begin{pmatrix} NP \\ Adv \\ Prep. P. \end{pmatrix}$$

$$NP \rightarrow N \begin{pmatrix} Dem \\ N \end{pmatrix}$$

$$Prep. P. \rightarrow Prep. + N$$

- e.g. Otieno ruóθ "Otieno (is) chief"
an gi pésa "I with (have) money"
gln adék "they (are) three"
Otieno ni pačU "Otieno is home"
Auma e čiége "Auma one wife-his"

The form of the equational sentence as given is basic. More elements, essentially adverbial ones, can be preposed and postposed to the sentence. E. g. adverbs of negation, temporal adverbs, nominal and prepositional phrases of place, manner, time, etc. can be used.

- B. Narrative sentences: have the simple basic form:

$S \rightarrow NP + VP$

$NP \rightarrow N \begin{pmatrix} N \\ Dem \end{pmatrix} (Adv)$

$VP \rightarrow (adv) (aux) V (Adv) \begin{pmatrix} Prep. P. \\ NP \\ adv \end{pmatrix}$

- C. Noun Phrase: has the following maximal construction:

$N (N) (adv) \begin{pmatrix} ma+statal V \\ numeral \end{pmatrix} (Dem) (Quan) -$
 $\begin{pmatrix} ma+N+V \\ (ma+) Perp. P. \end{pmatrix}$

- D. Verb Phrase: has the maximal construction:

$(adv) (aux) V (Adv) \begin{pmatrix} adv \\ Prep. P. \\ NP \\ S' \end{pmatrix}$

S' is introduced usually by subordinating conjunctions (cf. pg.).

E. Interrogative: there is no change in word order for interrogatives. Interrogative adverbs usually occur in sentence terminal position.

F. Negation: the negative particle is inserted directly before the verbal;
e.g. Auma ók otémo rInò "Auma did not try to run"

G. Passive: there is no true passive in Luo. The passive equivalent may be formed in two ways (Stafford 75-76):

1. by the impersonal pronoun prefix i-/I- (in the incomplete aspect of the verb);

e.g. Ìgóyá "I am being hit"

2. by the prefix o-/o- (in the complete aspect);

e.g. ògówá "I have been hit"

ògówá maték gĩ lUòè "we have been beaten severely with sticks"

APPENDIX B

SAMPLES AND FUNCTIONS OF SPEECH

<u>Sample</u>	<u>Age</u>	<u>Function</u>
<u>Othieno (A2)</u>		
(1) en ka she here	19	locate
(2) ŋam miya food give-me	19	demand
<u>Aoko (B2)</u>		
(3) ne tantam see candy	19	demand
(4) miya pi give-me water	20	demand
(5) miya tantam give-me candy	20	demand
(6) game hand(over)-it	20	demand
(7) ndawa piny cigarette down	20	locate
(8) baba ndawa father cigarette	20	describe
(9) miya tantam give-me candy	20	demand
(10) miya tantam give-me candy	20	demand

- | | | | |
|------|-----------------------------------|----|----------|
| (11) | ma wendo
this visitor | 20 | name |
| (12) | gino bar
thing-that good | 21 | name |
| (13) | oči Ulanda
he-went Ulanda | 21 | locate |
| (14) | oči Ulanda
he-went Ulanda | 21 | locate |
| (15) | ma e mare
this one his | 21 | name |
| (16) | okelo
he-brought | 21 | describe |
| (17) | okelo ma e
he-brought this one | 21 | describe |
| (18) | anenogi
I-see-them | 21 | describe |
| (19) | aneno čungu
I-see European | 21 | describe |
| (20) | ma e
this one | 21 | locate |
| (21) | en čungu
it European | 21 | name |
| (22) | ma e čungu
this one European | 21 | name |

- | | | | |
|------|---|----|----------|
| (23) | ma e?
this one? | 21 | locate |
| (24) | ma e
this one | 21 | locate |
| (25) | en gini
it thing-this | 21 | name |
| (26) | ma e
this one | 21 | locate |
| (27) | ma e žungu
this one European | 21 | name |
| (28) | awaŋe
l-burned-him | 21 | describe |
| (29) | ne mača
see that-there | 22 | demand |
| (30) | gare ringo
car runs
<u>Risper (D)</u> | 22 | describe |
| (31) | miya pi
give-me water | 20 | demand |
| (32) | amočo pi
l-drink water | 20 | describe |
| (33) | adwayo žam
l-want food | 20 | desire |
| (34) | miya Ugi
give-me porridge | 20 | demand |

(35)	mama ōi lwoko mama goes to-wash	23	locate
(36)	onge absent/without	27	negate
(37)	mača en gweno that-there it chicken	27	name
(38)	mača sandwa that-there box-ours	27	name
(39)	akia I-not-know	27	describe
(40)	en saa it clock	27	name
(41)	lweta hand-mine	27	name
(42)	wiya head-mine	27	name
(43)	en saa it clock	27	name
(44)	wuoča shoes-mine	27	name
(45)	akia I-not-know	27	describe
(46)	tienda leg-mine	27	name
(47)	ma e (7x) this one	27	name

- | | | | |
|------|---|----|----------|
| (48) | aŋeyo
I-know | 27 | describe |
| (49) | čungu biro
European comes | 27 | describe |
| (50) | ođi kulo
he-goes river
<u>Ochieng (C)</u> | 28 | locate |
| (51) | miya pi
give-me water | 25 | demand |
| (52) | adway čam
Iwant food | 25 | desire |
| (53) | keč kaya
hunger bites-me
<u>Rabuogi (G)</u> | 25 | describe |
| (54) | adwayo čam
I-want food | 28 | desire |
| (55) | adwayo čam
I-want food | 28 | desire |
| (56) | čam yaθ
eat medicine | 28 | demand |
| (57) | ičamo?
you-eat? | 28 | describe |
| (58) | miya buon
give-me potato | 28 | demand |
| (59) | en kača
she there | 28 | locate |

(60)	ičanda you-bother-me	29	describe
(61)	miya moro give-me more	29	demand
(62)	oluru oči e gunda quail went to garden	29	describe
(63)	mičungu omiya tamtam European gave-me candy	29	describe
(64)	baras otama brush defeats-me	29	describe
(65)	mama čande oa e gunda mama that left for garden	29	locate
(66)	baba čande obet piny father that sits down	29	describe
(67)	ne kača see there	30	demand
(68)	omoyo oduma she-dries maize	30	describe
(69)	Uhuru ičande Uhuru that (you spoke of)	30	locate
(70)	obet piny he(is)sitting down	30	locate
(71)	gweno ičande mar baba chicken you-spoke-of of father	30	name

(72)	mar baba of father	30	name
(73)	oōi skul he--went school	30	locate
(74)	adagi I-refuse	30	describe
(75)	onge absent	30	negate
(76)	gunda e ča garden one there	30	locate
(77)	oōi beto he-went to-harvest	30	locate
(78)	oōi gi beti he-went with slasher	30	describe
(79)	mama oōi pur mama went to-cultivate	30	locate
(80)	oōi gi beti he-went with slasher	30	describe
(81)	aōiga beto I-go-usually to-harvest	30	describe
(82)	beda onge slasher-mine absent	30	negate
(83)	gi sifiria /sufuria/ with sauce-pan	30	describe
(84)	gi Ohuru with Ohuru	30	describe

- | | | | |
|------|--|----|--------|
| (85) | ir mama
toward mama | 30 | locate |
| (86) | adwa ōi ir mama
I-want to-go toward mama | 30 | desire |
| (87) | baba oōi loka Utoma
father went up-there
Utoma | 31 | locate |
| (88) | mama oōi e siro
mama went to market | 31 | locate |
| (89) | miya tantam
give-me candy | 31 | demand |
| (90) | neye ma
see-it this | 31 | demand |
| (91) | koŋo ʒande
beer that | 31 | locate |
| (92) | baba oōi lokača
father went up-there | 31 | locate |
| (93) | miya ʒuno
give-me breast | 31 | demand |
| (94) | mano toka in
that car yours | 31 | name |
| (95) | bar kača
river there | 32 | locate |
| (96) | wan gi Odindo
we and Odindo | 32 | name |

(97)	miya kalam give-me pencil	32	demand
(98)	we maka (2x) - - stop grabbing-me	32	negate
(99)	koni gi koni side by side	32	locate
(100)	kenda only-1	33	name
(101)	ičogoo that-way	33	locate
(102)	obaro ylen she-splits wood	33	describe
(103)	oywečo she-sweeps	33	describe
(104)	oičo loka he-went-up there	33	locate
(105)	korgi side-this	33	locate
(106)	gwend baba chicken-of father	33	name
(107)	en gini it thing-this	33	name
(108)	en wuoče it shoes-his	33	name
(109)	en misungu it European	33	name

(110)	en kalani /kalatas/ it paper	33	name
(111)	gire thing-his	33	name
(112)	kom baba chair-of father	33	name
(113)	Euon baba rooster-of father	33	name
(114)	en bao it board	33	name
(115)	en gwno it chicken	33	name
(116)	en dsro it granary	33	name
(117)	en dsro it granary	33	name
(118)	od baba house-of father	33	name
(119)	gwn madičol chickens black	33	name
(120)	gin dičol they black	33	name
(121)	en ŷiko it kitchen	33	name

- | | | | |
|-------|--|----|----------|
| (122) | pod 110
still hurts | 33 | describe |
| (123) | a apuro apurā kends
(past) 1-cultivate
just only | 33 | describe |
| (124) | en toŋ Ohuru
it spear-of Ohuru | 33 | name |
| (125) | en par
it mat | 33 | name |
| (126) | en par
it mat | 33 | name |
| (127) | en 0igo
it door | 33 | name |
| (128) | en gwsno
it chicken | 33 | name |
| (129) | en žuožo
it excrement | 33 | name |
| (130) | gin obando
they cobs | 33 | name |
| (131) | akia
I-not-know | 33 | describe |
| (132) | oywečo
she-sweeps | 33 | describe |
| (133) | ma to amuodo
this and 1-chew | 34 | describe |

- | | | | |
|-------|--------------------------|----|----------|
| (134) | ma to akano | 34 | describe |
| | this but I-keep | | |
| (135) | barna ma | 34 | demand |
| | split-for-me this | | |
| (136) | mačača to koro rača | 34 | name |
| | that-there but then | | |
| | bad(for)me | | |
| (137) | mitokača to koro rača | 34 | name |
| | motor-car-that but then | | |
| | bad(for)me | | |
| (138) | dan anyul tamtambi duto | 34 | desire |
| | would-like I-put-in-my- | | |
| | mouth candy-your whole | | |
| (139) | en to koro imuodo amuoda | 34 | describe |
| | it but then you-chewed | | |
| | just | | |
| (140) | ne kaka omuodo | 34 | demand |
| | see how he-chews | | |
| (141) | neye laka | 34 | demand |
| | see-it tooth-mine | | |
| (142) | tamtam motimo laka | 34 | describe |
| | candy which-did(it to) | | |
| | tooth-mine | | |
| (143) | dan agoyi piny ku | 34 | desire |
| | would-like I-push-you | | |
| | down here | | |

- | | | | |
|-------------------|---------------------------------------|----|----------|
| (144) | tamtam onge ka?
candy absent here? | 34 | negate |
| (145) | to koni?
but side-this? | 34 | locate |
| (146) | kel ku
bring here | 34 | demand |
| (147) | ibiro duogo?
you-going to-return? | 34 | describe |
| <u>Akinyi (G)</u> | | | |
| (148) | adwa žiemo
I-want food | 28 | desire |
| (149) | adwa pi
I-want water | 28 | desire |
| (150) | ma nyuka
drink porridge | 29 | demand |
| (151) | adagi
I-refuse | 30 | describe |
| (152) | otu, otu /otuž/
it-has-hole | 30 | describe |
| (153) | ka otu
here it-has-hole | 30 | describe |
| (154) | miya žak
give-me milk | 30 | demand |
| (155) | miya bolo
give-me banana | 30 | demand |

(156)	adwa pi I-want water	30	desire
(157)	piypiy /pilupilu/ keč pepper hot	30	describe
(158)	miya tamtam give-me candy	30	demand
(159)	atuo I-sick	30	describe
(160)	adwa ōi nindo I-want to-go to-sleep	30	desire
(161)	uma cover-me	30	demand
(162)	ne tamtam (2x) see candy	31	demand
(163)	owuok he-left	32	describe
(164)	giōi gi kwara they-went with grand- father	32	describe
(165)	ma aqo? this what?	33	name
(166)	baba, itieko? father, you-finished?	33	describe
(167)	ma rač this bad	33	name

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|-------|---|----|----------|
| (168) | baba, ibiro?
father, you-coming? | 33 | describe |
| (169) | mi Sabomo
give Sabomo | 33 | demand |
| (170) | ma ŋungu
this European | 33 | name |
| (171) | baba, weya
father, let-me | 33 | demand |
| (172) | wane
eye-her | 34 | name |
| (173) | ume
nose-her | 34 | name |
| (174) | iθe
ear-her | 34 | name |
| (175) | oŋamu
it(was) eaten | 34 | describe |
| (176) | en θi ŋungu
it baby-of European | 34 | name |
| (177) | mara
mine | 34 | name |
| (178) | mari
your | 34 | name |
| (179) | Auma omiya nyuka
Auma gave-me porridge | 34 | describe |
| (180) | miya tantam
give-me candy | 35 | demand |

(181)	we tantamba leave-alone candy-mine	35	demand
(182)	siruača mama kano sweater-my mother kept	35	describe
(183)	rwakna siruača dress-for-me sweater-my	35	demand
(184)	ne tantam see candy	35	demand
(185)	ma tenda? this stool-mine?	35	name
(186)	adwa tenda I-want stool-mine	35	desire
(187)	ma tenda this stool-mine	35	name
(188)	Sabomo tweyo kitamba Sabomo ties scarf	35	describe
(189)	adwa kitamba I-want scarf	35	desire
(190)	Sabomo, bi ka Sabomo, come here	35	demand
(191)	twe wane tie head-his	35	demand